

M2000

M800

ENGINEERING MANUAL

HARDWIRED CONTROL UNIT

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Preface

About this Manual

This manual is for engineers who need to install or configure M-Series control panels using software version 3.11.x. The manual gives an introduction to the features of the panels, provides general engineering guidelines for planning an installation, and provides full details of the engineer's menu options.

A full list of engineer menu options, their positions within the menu hierarchy and brief details of how to use the options is given in the Quick Reference on page 161.

Other Publications

For detailed connection information, please refer to the appropriate *Installation Instructions*. Separate installation instructions are provided for each control panel and peripheral device.

For details of how to use the panel's user options, please refer to the *Manager's Manual*.

The *User's Guide* provides details of how to set, unset and reset the alarm system and is intended for end users.

Obsolete Products

At the publication of this manual, the following products are obsolete and no longer supplied by Cooper Security:

M1000, MKP1, CPA6OM, LEC6, MIDNode, RM3A.

This manual provides information on these items for your assistance when fitting new control units to existing alarm systems that use older versions of the M-Series family.

Please note that this manual does not provide any information on the M800ID Plus, which does not support software version 3.11.07.

Chapter 1: Introduction

About the Panels

The M2000 and M800 intruder alarm panels have been designed to satisfy the most demanding requirements of alarm-systems professionals. The panels are flexible, easy to install and robust, yet the modular approach of the system hardware ensures that a cost-effective solution is available for installations of any type or size.

Each control panel supports a different number of programmable zones and provides alternative network solutions to match the system requirements.

The configuration menus are feature packed for ultimate flexibility, yet are both logical and easy to use. Systems can be set up with ease, either from a keypad or via a PC running the Downloader software.

Both panels include a USB connector for a local connection to a Downloader PC. The M2000 also has a Serial (RS232) port, which can be used instead of the USB port if required.

The M2000 and M800 include a built-in modem, which enables direct connection to a telephone network without the need for an external modem. The modem allows remote connection to an Alarms Receiving Centre (ARC), or to a PC running the Downloader software.

Each zone can be one of several different types. The zone type determines how the system responds when a sensor on the zone triggers. For example, for a normal alarm zone type, an alarm is generated only if a sensor is triggered while the zone is set. For a panic alarm zone type, an alarm is generated irrespective of whether the system is set.

The system is capable of being divided into separately controlled areas known as "wards", which enable the premises or parts of the premises to be set or unset independently.

The main differences between the control panels are shown in the following table.

Table 1: Differences between control panel types

Feature	Panel Type		
	M800	M1000 ¹	M2000
EN50131-1/PD6662 grade (max)	3	3	3
Maximum zones ²	40	144	264
Wards	4	8	8
Ward groups (part sets)	4	4	8
User codes (including 1 engineer code)	50	100	251
Network ports	2 ³	2 ³	2 ³
On-board zones	8	8	8
Digital communicator outputs	16	16	16
On-board transistor outputs	2	3	3
On-board relay outputs	1	2	2
On-board modem	Yes	Yes	Yes
CPA6 output module port	Yes	Yes	Yes
No. CPA6 modules supported ⁴	5	18	31
Serial port ⁵	No	Yes	Yes
Event log entries	1000	2000	3000
Shunt groups	5	10	10

The following figures illustrate the network architecture of each type of panel.

☞ See "Compatible Devices" on page 6 for details of compatible devices, including keypads, LECs, MSNodes, MRNodes, and MSPSUs,

¹ The M1000 is obsolete.

² Each panel includes eight on-board zones.

³ On an M2000 networks 1 and 2 can both connect to keypads or Nodes. On a M800/M1000 network 1 can connect to keypads and LECs only.

⁴ CPA6OM is now obsolete.

⁵ All panels include a USB port.

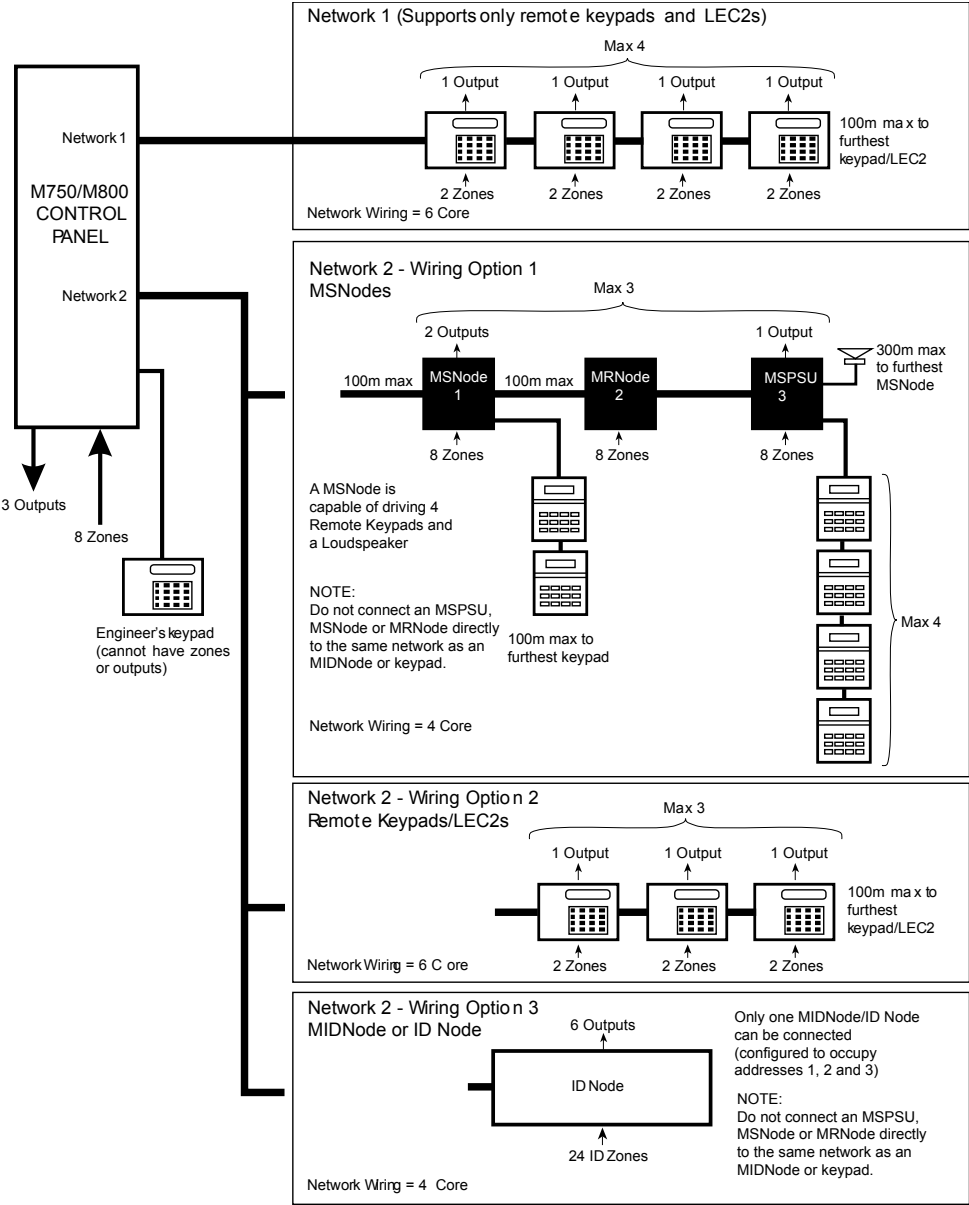


Figure 1) Network Architecture for M800 Control Panel

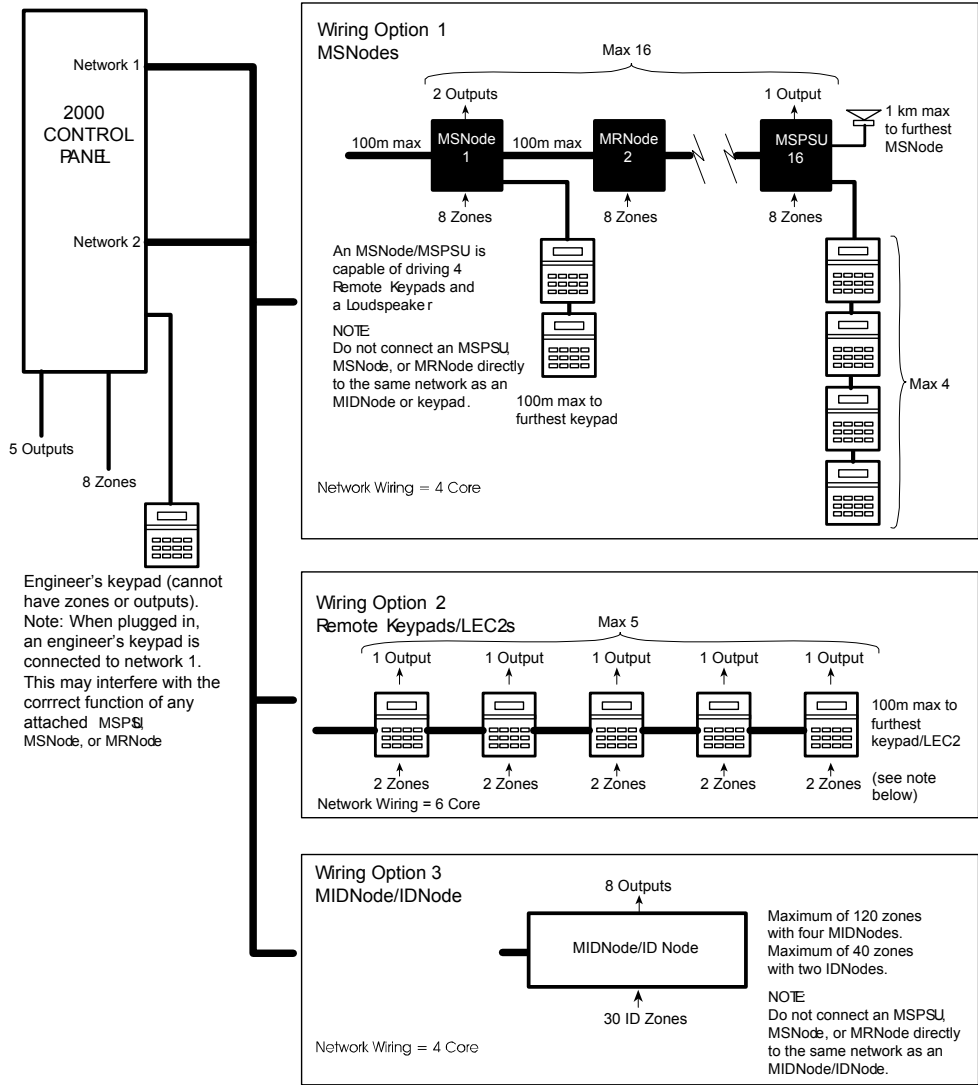


Figure 2) Network Architecture for the M2000 Control Panel

Control Panel Features

The control panels benefit from the following features.

Network Ports

The network ports enable additional devices to be connected to the control panel for system expansion. The number of networks and the devices available for networking depend on the control panel used.

Transistor Outputs

Each control panel contains programmable transistor outputs, which provide control for external equipment:

Depending on panel type, one or two outputs are switched negative. These switch from 12Vdc to 0V on activation, and in this mode can sink up to 500mA from a 12Vdc source.

One output is switched positive. This switches from 0V to 12Vdc on activation, and can deliver up to 500mA to an external load.

Relay Outputs

Relay outputs provide voltage-free changeover contacts, which can be programmed to switch external equipment on or off. Depending on panel type, there are one or two relay outputs.

Digital Communicator Outputs

These outputs are normally connected to a digital communicator – a device that transmits the status of each output to an Alarm Receiving Centre. The panel provides 16 programmable outputs, depending on panel type. Each output can be programmed as required, e.g. to indicate a zone alarm.

If required, the outputs may alternatively be used to drive low-power devices such as LEDs.

By default, each output is switched negative, i.e. normally at +12Vdc and switches to 0V when active. When at 0V, the output can sink up to 100mA.

If required, the sense can be reversed during system configuration, i.e. normally at +0V and switches to 12Vdc when active. In this case, when switching to +12Vdc, each output can source up to 5mA to an external load.

USB and Serial PC Ports

Optionally, a PC running the Downloader software can be connected to the control panel for system configuration and data uploading. The PC can connect to the panel's USB port, or optionally on an M2000, via the Serial (RS232) port.

Note: Cooper Security recommend that you use a USB lead 1.5 m or shorter when connecting to the control panel. Make sure that you use only good quality USB cables.

On-Board Modem

On M2000 and M800 an on-board modem allows the control panel to be connected to a remote PC running the Downloader software, and alarm status information to be transmitted to an Alarm Receiving Centre (ARC).

The control panel can be easily connected to the telephone network using the on-board RJ11 telecom socket. Alternatively, a PSTN terminal block is provided for optional wired connection.

More recent versions of the control unit pcbs also provide molex connectors for a plug-on adsl filter: Cooper Security part ADSL01.

Printer Port

A serial printer such as a DATAC printer can connect to the control panel to obtain system and log print outs, or to print all system events as they occur.

Engineer's Keypad Port

Optionally, an engineer's keypad can be temporarily connected directly to the "Engineer's Keypad" port on the control panel. The keypad can be disconnected without causing a tamper alarm.

An engineer's keypad is intended to be temporary connected to the control panel for system configuration and testing at the control panel. The keypad can be disconnected without causing an alarm. Once a system has been set up, system configuration should normally be carried out from a standard keypad.

CPA6 Output Module Port

Both panels include a port for CPA6 Output Modules (page 8). (Note that the CPA6OM is now obsolete.)

External Bell Output

The control panel has one external bell output to drive standard Self-Activating Bell (SAB) or Self-Contained Bell (SCB) modules. Additional external sounders can be driven from MSNodes using, for example, the 8600 relay module (ensure that the 1A rating of the relay module is adequate for the sounder). You will need an external 12V power supply to drive external sounders switched by an 8600 relay module.

Extension Loudspeaker Connectors

Up to two extension loudspeakers can be connected to the control panel (or one on any MSNode).

Back Tamper Switch

The back tamper switch ensures that unauthorised removal of the lid can generate an alarm condition.

Battery Backup

The control panel can be fitted with a 7AH or 17AH battery to enable the system to function in the event of a mains failure.

Compatible Devices

System expansion is achieved by using the following devices.

Keypad

Keypads enable setting, unsetting and programming of the system. The system must have at least one keypad. Each keypad provides an additional two zones and one switched-negative programmable output.

The following types of keypad are available.

MKP1 – This keypad is now obsolete. However, where it is part of an existing installation it will continue to work if you upgrade the control unit to software version 3.11.

MKP2 – This keypad has a back-lit Liquid Crystal Display (LCD), a Power LED, and a programmable Function LED. The keypad supports 3-resistor anti-masking zones.

MKP3 – This is similar to the MKP2, but has a built-in proximity module that enables users to identify themselves to the system by presenting a proximity tag or card. In addition the keypad has an extra connector for an external proximity reader.

NOTE:

The programmable output available on the keypad PCB is electronically linked to the lower LED on the display. The LED is active when the output is active. There is a jumper link "LED mimic" on the keypad pcb that you can remove if you wish the lower LED to stay dark.

By default the keypad output is programmed as "Pending". This means that it becomes active if there are two (or more) alerts pending.

When connected to an MSNode, the keypad output follows one of the two outputs on the MSNode. To program the function of the keypad output you must program the function of one or other of the MSNode outputs.

To select which output the keypads will follow:

Give the keypad an even address (2 or 4) to follow output 2.

Give the keypad an odd address (1 or 3) to follow output 1.

Note that the zones on keypads attached to MSNodes do not provide extra zones over and above the eight zone provided by the MSNode.

IDNode and MIDNode

(Note that IDNodes and MIDNodes are now obsolete.) IDNodes and MIDNodes provide up to eight additional programmable outputs (four switched positive and four switched negative) and 30 additional zones using a single ID detector loop.

A single IDNode or MIDNode can be connected to a network on an M800 control panel. Up to 24 zones and six outputs (three switched positive and three switched negative) can be used.

When using IDNodes, a maximum of two IDNodes can connect to a network on an M1000/M2000 panel, and up to 40 zones can be used. When using MIDNodes, a maximum of four MIDNodes can connect to a network on an M1000/M2000 panel, and up to 120 zones can be used.

MSNode

The MSNode provides:

Eight zones, capable of supporting closed circuit, Fully supervised loop (FSL) or three-resistor anti-masking zones.

Two programmable outputs (one switched positive and one switched negative).

Connection for up to four keypads.

Support for one loudspeaker.

MRNode

By fitting one or more MRNodes to a system the installer can employ a variety of wirefree detectors to protect areas without running extra cabling. In addition, the user gains the ability to set and unset the system using radio telecommands, or start panic alarms using PA transmitters. The MRNode connects to the control unit over the standard network cabling. The control unit treats the wire free detectors as standard zones. Each MRNode can support up to eight detectors, plus any combination of telecommands or PA up to a maximum of eight devices.

MSPSU

The MSPSU has an on-board power supply, which provides power for devices connected to the MSPSU, or for other devices on the network. The MSPSU also enables the system to be expanded by an extra eight zones and one programmable output. The zones can connect to movement detectors, smoke detectors, panic buttons or other sensors. You may also connect up to four keypads and one extension loudspeaker to the MSPSU.

Note: The MSPSU acts as an MSNode and can replace one of these nodes on the network. Consequently, each MSPSU added reduces the allowable number of MSNodes by one.

WARNING: This device may contain mains voltages.

CPA6 Output Module

The CPA6 Output Module (now obsolete) provides eight switched-negative programmable outputs rated at 100mA, which can be used to drive LEDs or relays, perhaps to give ward status information and/or zone alarm indications.

See page 2 for details of how many modules can be connected to each control unit.

LEC2

The LEC2 expander provides two zones and one switched-negative output. Note that a LEC2 must not share a network with a Node or MSPSU.

LEC6

(Now obsolete.) Direct connection of an LEC6 (6-zone) expander to a control panel network port is supported for existing systems that are being upgraded. Ensure that the number of zones does not exceed the number that could be provided by keypads alone. Note that a LEC6 must not share a network with a Node or MSPSU.

8600 Relay Card

The 8600 Relay Card allows you to convert the on board digital communicator outputs from transistor outputs to voltage free relay outputs. Each 8600 provides eight relays. Later M800 and M2000 pcbs provide connectors for the cables supplied with the 8600.

System Wiring

Cable Type

In general, the panel requires standard 7/0.2 un-screened alarm cable for wiring to MSNodes, MRNodes, MSPSUs, keypads, LEC2s, and zone sensors. The number of cores varies, depending on the device being connected.

Screened cable may prove necessary if the installation site has equipment that produces high levels of R.F. (Radio Frequencies), for example heavy industrial plant such as welding equipment. See "General Wiring Considerations" in the M800 and M2000 Installation Instructions.

Maximum Cable Distances

Nodes

The distance between a control panel and node (MSNode, MRNode, MSPSU), or between any two nodes must not exceed 100m. The distance from the control panel to furthest node must not exceed 400m for a M800 or 1km for an M2000. See Figure 3).

Keypads

The distance from a control panel, MSNode or MSPSU to the furthest keypad on the chain must not exceed 100m (see Figure 3).

Note: Do not connect keypads to the same network wiring as an MRNode (or any other node). However, you can connect keypads to MSNodes or MSPSUs, but not MRNodes.

LEC2

The distance from a control panel to the furthest LEC2 must not exceed 100m.

Cable Segregation

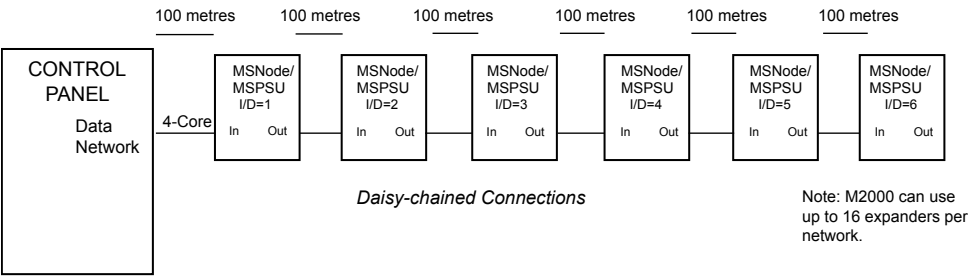
All network and zone wiring must be segregated from any other wiring, such as mains supply cables, telephone cables, computer network cables and R.F. cables. In addition, the network and detection zone cables should be kept clear of cables supplying sounders or extension loudspeakers.

 *Do not route more than one network down a single multi-core cable.*

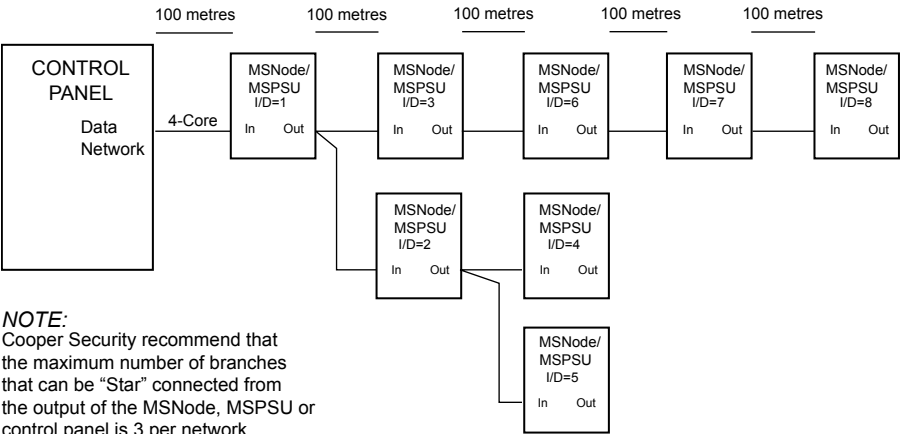
Mains Wiring

All mains wiring must be carried out only by a qualified electrician and must comply with current local regulations.

M800: 400m max. M2000: 1 km max.



M800: 400m max. M2000: 1 km max.



NOTE:
Cooper Security recommend that the maximum number of branches that can be "Star" connected from the output of the MSNode, MSPSU or control panel is 3 per network.

Figure 3) Maximum Distances to MSNodes

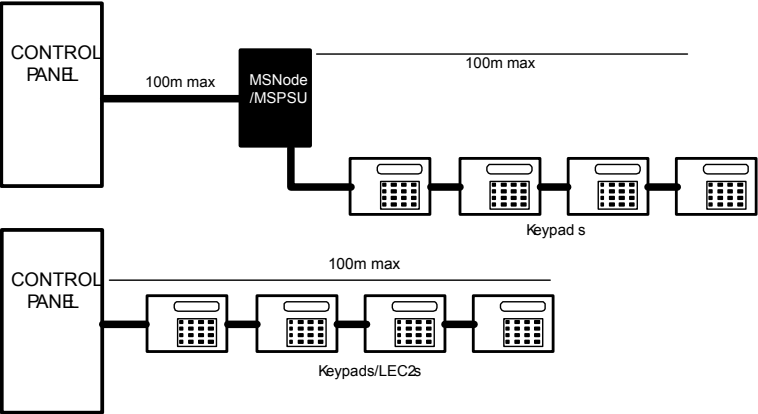


Figure 4) Maximum Distances to Keypads/LEC2s

Networker Interface Board

A Networker Interface Board (NIB) enables the maximum distance from a control panel to an MSNode, MRNode, MSPSU, MIDNode, IDNode or keypad to be increased to 1km.

The NIB is supplied as a driver unit and receiver unit. The driver unit connects to the output of the control panel and the receiver unit can be connected up to 1km away. A separate remote power supply unit is required at the receiver unit.

Calculating Voltage Drop

In order for the system to work correctly, the voltage at each device must NOT drop below 10.5V. Cooper Security recommend that for reliable working while mains power is present you should ensure that the voltage at each device is above 12.0V.

Standard 7/0.2 alarm cable has a resistance of 80ohms per 100m per core. The voltage drop is calculated using the following formula: $V \text{ Drop} = \text{Current drawn} \times \text{cable length} \times 0.08 \times 2$

The shaded area of the table shows where the voltage drop exceeds 1.6V. Since the voltage of the A and B connections on the network cabling is 13.6V at the control panel, the shaded area represents cable lengths and current drawn combinations where the voltage drops below 12V.

Table 1. Voltage Drop

Current Drawn	Cable Length (Standard 7/0.2 alarm cable)									
	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m
60mA	0.10V	0.19V	0.29V	0.38V	0.48V	0.58V	0.67V	0.77V	0.86V	0.96V
80mA	0.13V	0.26V	0.38V	0.51V	0.64V	0.79V	0.90V	1.02V	1.15V	1.28V
100mA	0.16V	0.32V	0.48V	0.64V	0.80V	0.96V	1.12V	1.28V	1.44V	1.60V
120mA	0.19V	0.38V	0.58V	0.79V	0.96V	1.15V	1.34V	1.54V	1.74V	1.92V
140mA	0.22V	0.45V	0.67V	0.90V	1.12V	1.34V	1.57V	1.79V	2.02V	2.24V
160mA	0.26V	0.51V	0.77V	1.02V	1.28V	1.54V	1.79V	2.05V	2.30V	2.56V
180mA	0.29V	0.58V	0.86V	1.15V	1.44V	1.73V	2.02V	2.30V	2.59V	2.88V
200mA	0.32V	0.64V	0.96V	1.28V	1.60V	1.92V	2.24V	2.56V	2.88V	3.20V
220mA	0.35V	0.70V	1.06V	1.41V	1.76V	2.11V	2.46V	2.82V	3.17V	3.52V
240mA	0.38V	0.79V	1.15V	1.54V	1.92V	2.30V	2.69V	3.07V	3.46V	3.84V
260mA	0.42V	0.83V	1.25V	1.66V	2.08V	2.50V	2.91V	3.33V	3.74V	4.16V
280mA	0.45V	0.90V	1.34V	1.79V	2.24V	2.69V	3.14V	3.58V	4.03V	4.48V
300mA	0.48V	0.96V	1.44V	1.92V	2.40V	2.88V	3.36V	3.84V	4.32V	4.80V
320mA	0.51V	1.02V	1.55V	2.05V	2.56V	3.07V	3.58V	4.10V	4.61V	5.12V
340mA	0.54V	1.09V	1.63V	2.18V	2.72V	3.26V	3.81V	4.35V	4.90V	5.44V
360mA	0.58V	1.15V	1.73V	2.30V	2.88V	3.46V	4.03V	4.61V	5.18V	5.76V
380mA	0.61V	1.22V	1.82V	2.43V	3.04V	3.65V	4.26V	4.86V	5.47V	6.08V
400mA	0.64V	1.28V	1.92V	2.56V	3.20V	3.84V	4.48V	5.12V	5.76V	6.40V
420mA	0.67V	1.34V	2.02V	2.69V	3.36V	4.03V	4.70V	5.38V	6.05V	6.72V
440mA	0.70V	1.41V	2.11V	2.82V	3.52V	4.22V	4.93V	5.63V	6.34V	7.04V
460mA	0.74V	1.47V	2.21V	2.94V	3.68V	4.42V	5.15V	5.89V	6.62V	7.36V
480mA	0.79V	1.54V	2.30V	3.07V	3.84V	4.61V	5.38V	6.14V	6.91V	7.68V
500mA	0.80V	1.60V	2.40V	3.20V	4.00V	4.80V	5.60V	6.40V	7.20V	8.00V
520mA	0.83V	1.66V	2.50V	3.33V	4.16V	4.99V	5.82V	6.66V	7.49V	8.32V
540mA	0.86V	1.73V	2.59V	3.46V	4.32V	5.18V	6.05V	6.92V	7.78V	8.64V
560mA	0.90V	1.79V	2.69V	3.58V	4.48V	5.38V	6.27V	7.17V	8.06V	8.96V
580mA	0.93V	1.86V	2.78V	3.71V	4.64V	5.57V	6.50V	7.42V	8.35V	9.28V
600mA	0.96V	1.92V	2.88V	3.84V	4.80V	5.76V	6.72V	7.68V	8.64V	9.60V

Voltage Drop Example 1

Figure 5) shows two devices connected to the control unit. The first is 20m from the control unit and has 60mA being taken from its auxiliary supply to power detectors. The second is 20m from the first and also has 60mA being taken from its auxiliary supply to power detectors. The example shows that the voltage levels at both nodes is acceptable. The voltage at each device is as follows:

1. The total current being drawn at the first device = 120mA + 120mA = 240mA.
2. Voltage drop to the first device = 240mA @ 20m = 0.79V (see table).
3. Voltage at first device = control unit voltage - voltage drop = 13.60 - 0.79 = 12.81V.
4. The total current being drawn at the second device = 120mA.
5. Voltage drop to the second device = 120mA @ 20m = 0.38 (see table).
6. Voltage at second node = first device voltage - voltage drop = 12.81 - 0.38 = 12.43V.

Voltage Drop Example 2

The second example in figure 5) shows what happens when a third device is connected 20 metres from the second.

The voltage at each device is as follows:

1. The total current being drawn at the first device = $120\text{mA} + 120\text{mA} + 120\text{mA} = 360\text{mA}$.
2. Voltage drop to the first device = $360\text{mA} @ 20\text{m} = 1.15\text{V}$ (see table).
3. Voltage at first device = control unit voltage - voltage drop = $13.60 - 1.15 = 12.45\text{V}$.
4. The total current being drawn at the second device = $120\text{mA} + 120\text{mA} = 240\text{mA}$.
5. Voltage drop to the second device = $240\text{mA} @ 20\text{m} = 0.79\text{V}$ (see table).
6. Voltage at second device = first device voltage - voltage drop = $12.45 - 0.79 = 11.66\text{V}$.
7. The total current being drawn at the third device = 120mA .
8. Voltage drop to the third device = $120\text{mA} @ 20\text{m} = 0.38\text{V}$ (see table).
9. Voltage at third device = second device voltage - voltage drop = $11.66 - 0.38 = 11.28\text{V}$.

The second example shows that when the third device is added to the network the current drawn at each is increased and therefore the voltage drop is also increased. The voltage levels at the second and third devices are now below the recommended 12V threshold and may cause problems (even though the voltages are above the absolute minimum 10.5V threshold).

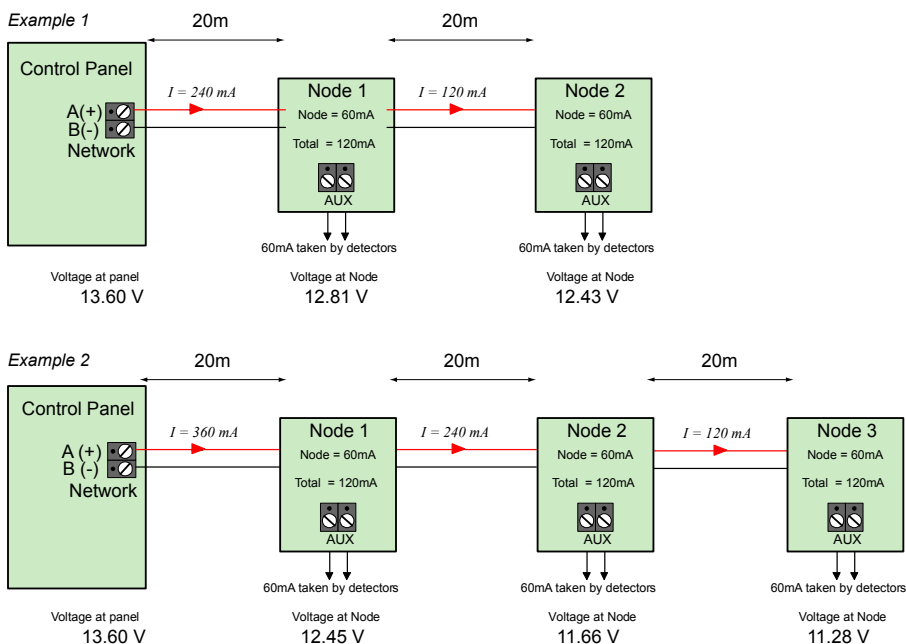


Figure 5) Voltage Drop Examples 1 & 2

Reducing Voltage Drop - Method 1

The simplest way to reduce voltage drop is to double up the supply connections (A & B), which will halve the resistance on each core and therefore halve the voltage drop. When using the

voltage drop table to calculate the expected voltage drop, simply divide the voltage drop by two. Figure 6) shows the same three nodes used in the previous example. The A and B network connections have been doubled up; in order to do so the network cable must have two spare cores. This method shows that voltage levels at all nodes is at a sufficient level.

Reducing Voltage Drop - Method 2

The second method to reduce voltage drop is to supply the detection devices from separate cores. This is the preferred method of reducing voltage drop as detectors generally operate at lower voltages (9.5V). When using this method, the network cable must have two spare cores. This method shows that voltage levels at all nodes is at a sufficient level.

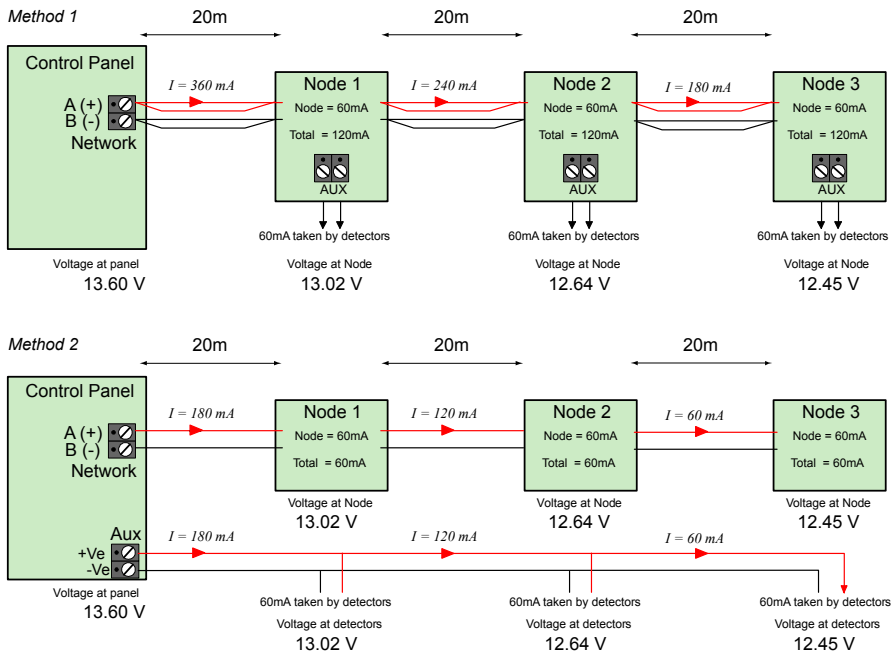


Figure 6) Reducing Voltage Drop - Methods 1 & 2

Remote Power Supplies

When voltage drops cannot be overcome by using the two methods previously described or the demand on the control panel power supply exceeds its capacity (as documented in the panel's *Installation Instructions*), one or more remote power supplies will need to be installed. The supply must have a "floating zero rail" if connected to the network, otherwise an earth fault will occur. Cooper Security also recommend that you use a monitored power supply. The MSPSU meets both of these requirements. When installing a remote power supply, you should install it close to the equipment it is powering.

Figure 7) shows the recommended method of installing a remote power supply. When connected as shown the last node has sufficient voltage level.

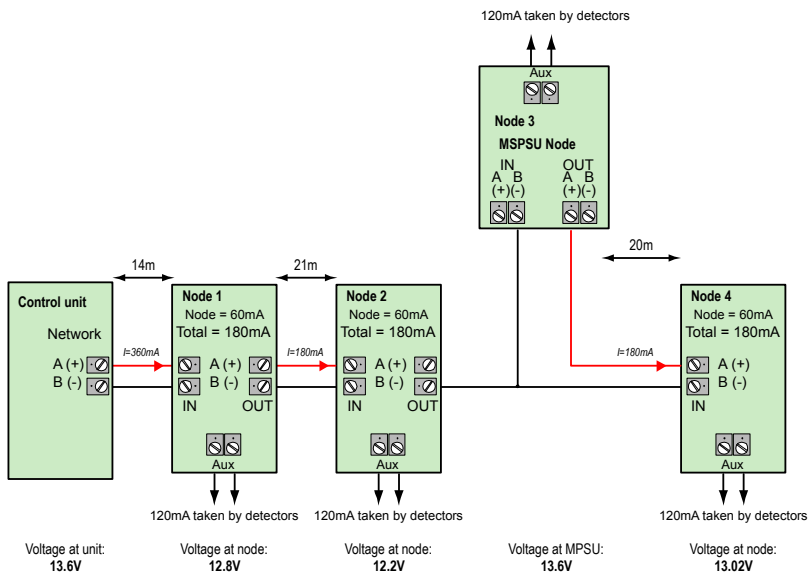


Figure 7) Connecting Remote Power Supply Units

Chapter 2: Getting Started

Starting the Panel for the First Time

Use the following procedure when starting a new system:

- 1. Follow the power-up procedure documented in the *Installation Instructions*. Make sure you apply a factory restart to ensure that the system begins with its factory default settings loaded.

The screen shows a start-up message similar to the one at the right (text may vary depending on keypad):

SW VERSION
1.09 Jan 26 2007

- 2. If the panel's lid is off, the sounder may start soon after power is switched on. This indicates a tamper alarm.
- 3. You may see following message:

! Alerts !
00:00 19 Mon 01 JAN

- 4. Enter your engineer code (default 1234).

The screen shows:

Country
UK PD6662 Grade 2

At this point you can select one of two sets of defaults: either PD6662 Grade 2, or PD6662 Grade 3. See page 133 for a listing of the default values. (If necessary, use option [2]-[7]-[3]-[8] to change defaults at a later date, see page 132.)

- 5. Press  or  to select the defaults followed by . (Alternatively, press either 1 for Grade 2, or 2 for Grade 3.)

Note: If you select Grade 3 when starting the control unit for the first time (or when returning a control unit to its factory defaults) then the Engineer's default code is 123400. If you select Grade 2 the default code is 1234.

The screen shows:

Language
English

- 6. Press  or  to select the language used on the keypad display, followed by . (Note that the software version may allow only one language.) The screen shows:

[ENT] to CONFIRM
000 LECS

The next messages show the number of each type of device found. EXP KEYPADS are keypads on an

MSNode. NODES include MIDNodes, IDNodes and TS Nodes.

If the number of devices detected is not as expected, check the connections to the devices and their address settings (normally set by a link on the device's PCB).

7. Press **[ENT]** until you see the following:

Equipment
Confirmed

8. Press **[ESC]**. After a few seconds the display shows:

Engineer Level 1
Press **[ENT]** or **[2]**

You are now logged on as an engineer and are ready to configure the system.

About Logging in as an Engineer

Logging in as an engineer causes other keypads connected directly to the same network or MSNode to display "System Busy". Keypads connected to a different network or MSNode display "Engineer on Site", and other engineers or users can log on to these.

You set the factory default engineer code when starting the control unit for the first time (see page 16) and selecting the default security Grade. For Grade 2 the factory default engineer code is 1234. For Grade 3 the factory default engineer code is 123400. In addition, you can change the system between four digit or six digit access codes (see page 91). If the system is set up for 6-digit codes, the default is 123400.

You will not be able to log in as an engineer if:

Another engineer or user is currently logged in at the keypad that you using.

A user has fully set the system (i.e. all wards armed).

Note that you are able to log in if the system was set by an engineer or is partially set (i.e. not all wards armed). This latter case enables you to log in if, for example, the site has safes or other "strong" areas that are often armed throughout the day.

A user has prevented you from gaining access using User option 1-9.

The Hi Security Eng configuration option is selected (page 88) and you do not have a "remote reset" code.

Logging Out

If you want to log out (i.e. exit from the Engineer menus completely), keep pressing **[ESC]** until you see the following, then press **[ENT]**.

Press **[Ent]** To
Leave Menus

Logging out also logs out any other engineer currently logged in at a different keypad. If you have been using more than one keypad, this prevents you from having to check each keypad before you leave the site.

About the Engineer Menus

The options in the Engineer menus enable you to perform tasks such as setting up the system, performing tests and viewing logged information. It is essential to configure the intruder panel using the Engineer menu options before you hand over the system to the end user.

There are two top-level Engineer menus:

Engineer Menu 1, as described in Chapter 3. Engineer Menu 1 contains the options shown on page 19.

Engineer Menu 2, as described in Chapter 4. Engineer Menu 2 contains the options shown on page 97.

A full list of options and their positions within the menu hierarchy is given in the Quick Reference on page 161.

Selecting Menu Options

To select an engineer option:

1. Press the  or  button to scroll to Engineer Menu 1 or 2, then press  to enter that menu. Alternatively, press hotkey  (for Engineer Menu 1) or hotkey  (for Engineer Menu 2), then .
2. Once you are in an Engineer menu, use the scroll keys ( or ) or hotkeys to select the required option. The option may itself be a menu containing further options.

In some cases, options are available only by scrolling.

Exiting from an Option or Menu

Pressing the  key takes you one step back in the menu hierarchy or one step back in a procedure (such as the procedure used by the Program Zones option described on page 20).

Note: IMPORTANT - When you return the system to user mode the control unit stores any changes you have made. If you power down the system before returning to user mode then the control unit will lose all the changes you made during that session.

Chapter 3: Using Engineer Menu 1

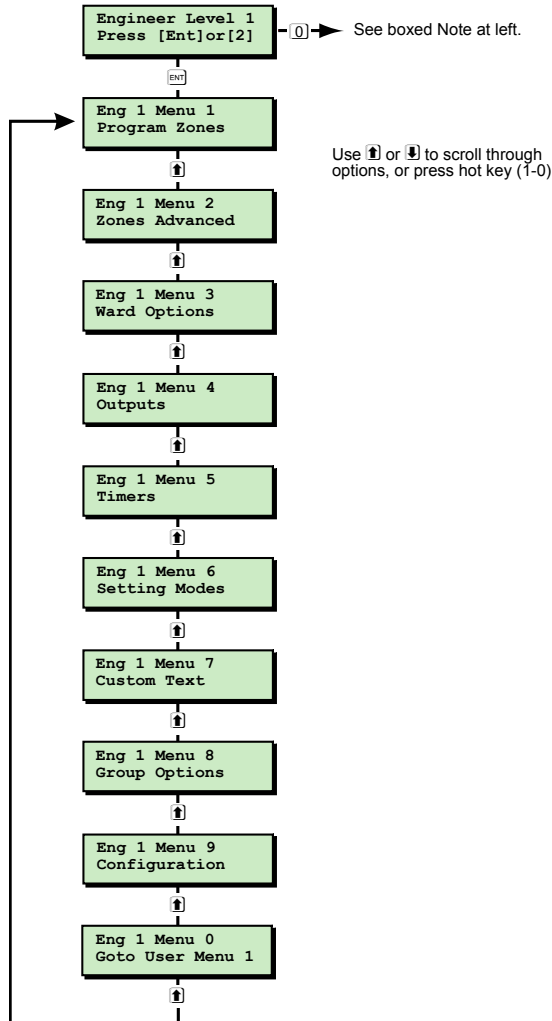
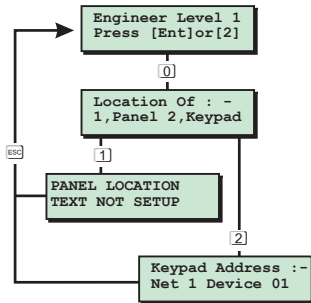
Options in Engineer Menu 1

The flowchart shown opposite illustrates the options in Engineer Menu 1.

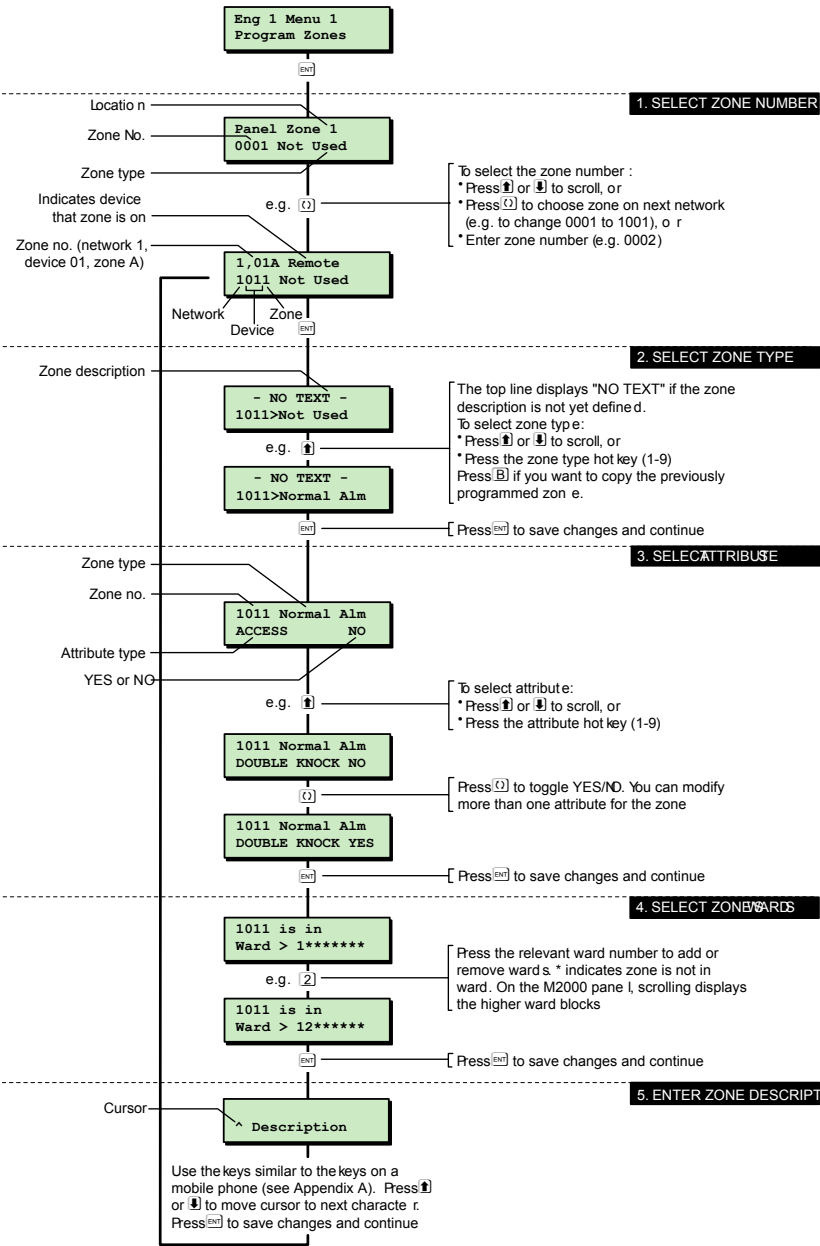
The order of the options in Engineer Menu 1 reflects the typical order that the options should be used to set up a system.

Note:

If you press **[0]** when the display shows "Engineer Level 1" then the display shows the start of a short menu that lets you see the panel location text and keypad address, see diagram below. Press **[1]** to see the panel location text. If there is not text stored the keypad display shows "Text not available". Use option **[1]-[7]-[2]** to key in a suitable text (see page 78). Press **[2]** to see the keypad address. Press **[ESC]** to return to Engineer Level 1.



Option 1-1: Programming Zones



☞ *Except when in Walk Test mode (User option 1-1-2), all programmed zone types are active and can be communicated to an ARC, even while an engineer is logged in. If the system is connected to an ARC and work carried out the system could cause alarms to trigger, it is recommended that you contact the ARC before work begins to avoid any unnecessary call-outs.*

You must program each zone using Engineer option **1-1** in order for the system to function correctly. The number of available zones depends on the panel type and expansion devices you are using (see page 2).

Use the following steps and the flowchart on the previous page to program a zone.

☞ *Advanced zone programming options are available in option **1-2**.*

Step 1 - Select Zone

The 4-digit number shown in the bottom-left corner of the display indicates the zone to be programmed.

For all zones:

The first digit is the network number. This is the network number of the device that the zone is connected to (0 for zones connected to the control panel PCB). The number of available networks depends on the type of control unit; see pages 3 to 4 .

The next two digits specify the device address that the zone is connected to (00 for zones connected to the control panel PCB). For devices such as keypads, the device address is determined by a link or switch on the device PCB.

Note that the zones on keypads attached to MSNodes do not provide extra zones over and above the eight zone provided by the MSNode.

The final digit specifies the zone number on the selected device.

Example: 2031 is (reading right to left): zone 1 of device address 03 connected to network 2.

Zones connected to the control panel are numbered 0001 to 0008.

Step 2 - Select Zone Type

The zone type defines how the panel will respond when the zone is triggered. The following zone types are available:

☞ *By default, a zone is "triggered" by opening the zone contacts. If the zone's Inverted attribute is set to **YES** (page 29), the zone triggers when the zone contacts close.*

☞ *Copying zone details: Pressing B or  at step 2 copies all properties of the previously programmed zone.*

0 – Not Used

This zone never generates any alarm. It can, however, be used to operate an output programmed to mimic the zone status; see page 58.

1 – Normal Alm

The Normal Alm zone generates an alarm (see below) when the system is set. By default, a full alarm is generated, unless overridden by option 1-8-4 (page 83).

2 – 24 Hour

This zone is monitored at all times. When triggered in the unset condition, an internal alarm is generated. When triggered in the set condition, a full alarm is generated, unless overridden by option 1-8-4 (page 83).

Full, Local and Internal Alarms

A **full alarm** causes keypad sounders, the extension loudspeaker, external sounders, strobe and communications to operate.

A **local alarm** causes keypad sounders, the extension loudspeaker, external sounders and strobe to operate.

An **internal alarm** causes only keypad sounders and the extension loudspeaker to operate.

Note: Only keypads and extension loudspeakers assigned to the ward that is in alarm will sound. The extension loudspeaker is assigned to wards using the Panel Speaker attribute (page 36). Keypads are assigned to wards using option 1-3-1 (page 34).

The external sounder and strobe can be disabled using the Bell & Strobe ward attribute (p 37).

The alarm response can be overridden when a ward group is set by using option 1-8-4 (p 83).

3 – PA Silent

This zone is monitored at all times. When triggered, it can activate outputs that follow the Panic Alarm (page 44) or P.A. Alarm (page 54) event, but it does not cause an audible alarm. It cannot be used to generate confirmed alarms (page 89).

4 – PA Audible

This is the same as the PA Silent zone type, but also generates a full alarm.

5 – Fire

A Fire zone is normally connected to a smoke detector that is monitored at all times. When triggered, it generates a fire tone at keypads and at the panel's extension loudspeaker (if fitted). It also activates the strobe and pulses the external bell output for the Bell Duration time (page 61), providing it is not disabled by the Bell & Strobe attribute (page 37).

See also the Unset Fire ward attribute (page 37) and Latching Fire configuration setting (page 86).

6 – Technical

This zone is monitored at all times. When an event triggers the zone, the control unit activates any outputs of type Technical (page 45) and sounds an alert tone at the keypads. The user can reset the alert by entering their access code at a keypad.

7 – Final Exit

A Final Exit zone must be the first detector or door contact that is triggered when entering the protected area. Once set, triggering this zone starts the ward Entry Delay timer (page 61).

☞ *While the Entry Delay timer is running, any Entry zone (page 24), or any zone that has the Access attribute (page 28) set to YES does not cause an alarm.*

☞ *The Entry Delay timer can also be started if the system is part set by triggering a Normal Alm zone that has the Entry attribute (page 29) set to YES.*

☞ *You may want to set the Access attribute for a Final Exit zone to YES to prevent the keypad sounder from making a "zone in fault triggered" tone when the detector is triggered.*

If the setting mode is Final Exit or Exit Terminate (page 76), triggering the zone when exiting the protected area affects when the panel sets the ward.

8 – Exit Term

An Exit Terminator zone is normally connected to a push button outside the protected area, and is used as a positive confirmation that setting of the associated wards is required. Depending on the setting mode (page 76), triggering an exit terminator may be required before the panel can set the associated wards, or triggering exit terminator may shorten the period for the wards to set.

An exit terminator zone type is not relevant for the entry procedure.

☞ *An Exit Terminator zone can be used as a door bell if one of the Chime Tone zone attribute (page 29) is applied.*

9 – Entry

During the entry time, the control unit ignores any activation of zones with this type.

When used in conjunction with with Ward Attributes **1-3-2** option 16 (see page 38) the control unit treats any zone programmed as type Entry as a Final Exit zone type when the ward is set. For example, if the installer uses **1-3-2** option 16 to make ward 2 Entry=F/E, then when a user sets ward 2 any Entry zone type in that ward will be immediately considered as a Final Exit zone type.

Typically, this option is used in domestic applications for a hall PIR that is used for two wards, e.g. ward 1 (set when leaving the building) and ward 2 (set when going to bed). If ward 2 (but not ward 1) is included in Entry=F/E, the hall zone is used as a Final Exit zone type when setting ward 2.

☞ *The remaining options are available only by scrolling.*

Keyswitch

A Keyswitch zone is normally connected to a shunt-lock or keyswitch, which can be used to set or unset assigned wards.

Assuming the zone's Inverted attribute is set to the default of NO (page 29), if a ward is currently unset, opening the zone contacts starts the process of setting the ward.

If a latching switch is used, the zone contacts must remain open until the ward is set, otherwise the setting procedure is cancelled. Once set, the ward can be unset in the normal manner from a keypad or by closing the zone contacts.

Note: If a user employs a keypad to unset a ward that was set by a latching keyswitch, then the keyswitch will be at the wrong position to set the ward again. The user must return the keyswitch to "unset" before attempting to set the system.

If a non-latching switch is used, set the Non Latching zone attribute (page 30) to YES. The first operation of the switch sets the ward, and the next unsets the ward.

Shunt Key

A Shunt Key zone is normally connected to a shunt-lock or keyswitch that is monitored at all times. While the key is turned and the zone contacts are in the triggered position (i.e. by default open), the panel shunts (i.e. isolates) all zones that have the Shuntable attribute (page 29) set to YES and belong to a ward assigned to the Shunt Key zone. Any type of zone can be shunted.

If you do not assign any wards to the Shunt Key zone, opening the zone contacts shunts all zones that have the Shuntable attribute set to YES and are directly connected to the same device as the Shunt Key. For example, if the shunt key is connected to an MSNode, the system shunts all shuntable zones connected to the same MSNode. Similarly, if the shunt key is connected directly to the panel, the system shunts all shuntable zones directly connected to the panel. Note: A Shunt Key zone cannot itself be set with the Shuntable attribute.

If a non-latching switch is used, set the Non Latching zone attribute (page 30) to YES. The first operation of the switch shunts the zones, and the next removes the shunt.

Tamper

A Tamper zone is monitored at all times and is used to monitor the tamper status of external equipment. When triggered in the set condition, a full alarm is generated, unless overridden by option 1-8-4 (page 83).

This zone type can be used for a negative tamper return for monitoring SABs, etc. When using type of monitoring, the zone input is a normally-negative signal (rather than a normally-closed contact across the zone terminals), and therefore the zone **MUST** have the Inverted attribute (page 29) set to YES.

Perimeter

When an event triggers a perimeter zone, the control unit immediately activates all outputs with the "perimeter" type (see page 56). A perimeter zone is set when its associated ward(s) is set, and ignored when its associated ward(s) is unset. A perimeter type zone does **NOT** cause outputs that follow the Alarm event (pages 44, 54 and 58) to activate.

Triggering a Perimeter zone is not counted when the panel determines whether there is a confirmed alarm (page 89). Perimeter zones are usually connected to outside detectors, which have a higher probability of being accidentally triggered.

Lock Set

Use this zone type if you want a ward's Final Exit zone to be considered as a Normal Alm zone while the exit door is locked. To use this zone type, the Setting Mode must be set to Lock Set (page 77), and a Final Exit zone must be in the same ward as the Lock Set zone. The zone should be connected to a lock switch.

To set the system, the user first enters his/her user code at a keypad or operates a keyswitch connected to a Keyswitch zone. The control unit starts the exit tone (the exit time is infinite for this mode). The user then operates the Final Exit zone and turns the key in the lock switch to "locked". The system sets seven seconds after the lock switch contacts open.

While the lock switch is locked, the final exit zone operates as a Normal Alm zone.

To unset the system the user turns the lock switch to "unlocked" (closing the lock switch contacts). The keypads start a continuous tone. At this point the user can lock the lockswitch again without causing any alarm. When the user triggers the Final Exit zone, the control unit starts the Entry Delay timer (page 61). The user completes entry by unsetting the system in the normal way.

Note that when the user unlocks the lockswitch, the control unit cannot generate confirmed alarms (page 89), since an authorised presence in the building is assumed. The control unit can generate confirmed alarms if the user locks the lockswitch without starting the Entry Delay timer.

 *Note: Use only one Lock Set zone per ward.*

PSU Battery

A PSU Battery zone can connect to a monitored power supply to monitor the output voltage of the standby battery in the external power supply unit. If the zone triggers, keypads sound a tone every minute and the panel generates a "PSU Battery" alert message (displayed when a user enters a valid user code). Any outputs programmed as type PSU - Battery (page 48 and 56) or Battery Fault (page 48) also activate.

PSU Fuse

A PSU Fuse zone can connect to a monitored power supply unit which uses relays to signal the condition of a fuse in the external power supply unit. If the zone triggers, the keypad sounds a tone every minute and the panel generates a "PSU Fuse Blown" alert message (displayed when a user enters a valid user code). Any outputs programmed as type PSU - Fuse (page 48 and 56) also activate.

PSU Power

A PSU Power zone can connect to a monitored power supply unit which can monitor the output voltage of the external power supply unit. If the zone triggers, the keypad sounds a tone every minute and the panel generates a "PSU Power Supply" alert message (displayed when a user enters a valid user code). Any outputs programmed as type PSU - Power (page 48) or PSU Mains (page 57) also activate.

Masking

Masking indicates that a sensor is being obscured by boxes or other objects.

If a single three-resistor zone is used to communicate alarm, tamper and masking status, use a standard zone type (e.g. Normal Alm), with the Masking attribute set (page 29). The *Installation Instructions* describe how to connect such a sensor and the resistance values needed to indicate each status.

Alternatively, two zones can be used: one for the masking status and the other for alarm/tamper status. In this case, the sensor's masking contacts must connect to a zone programmed as type "Masking", and the alarm/tamper contacts must connect to a standard zone type. Double-pole (CCL) or FSL wiring can be used for either zone.

Masking can activate mask outputs, depending on whether the zone is set or unset and the Mask configuration options (see page 93). Also, masking may or may not inhibit users from setting the affected ward, depending on whether the Mask Override or Mask Inhibit configuration option is selected (page 93).

☞ *A masking zone, or a standard zone with a masking status, must remain active for the duration of the Anti Mask timer (page 63) for a masking alert or masking output to activate.*

Occupancy

This zone type enables the control unit to display a warning message at the keypad if a user sets a ward that may still be occupied by other people.

A zone of this type is normally connected to an "occupancy" output (open/closed contact) of an access-control system. When the contact is opened, this indicates that the ward(s)

associated with the zone are occupied. When the contact is closed, this indicates that the wards are not occupied.

If a ward is occupied when a user attempts to set the ward, a warning message is displayed, but the user can override the message and continue with the setting procedure.

Possible applications for this zone type are in controlled access areas where each occupant must sign in and out using an access control system.

Security

A Security zone type is monitored at all times and can be used to lock-out all keypads in wards associated with the zone (page 34). The keypads cannot be used while the zone contacts are in the triggered position (i.e. by default open).

If a non-latching switch is used, set the Non Latching zone attribute (page 30) to **YES**. The first operation of the switch disables the keypads, and the next enables the keypads.

Note: The control unit does not lock out the keypad during entry times, regardless of the state of the security zone input.

Shock Entry

When fitted and programmed correctly, the Shock Entry zone type works as follows:

In a normal entry, the user unlocks the final exit door and perhaps bangs the door, activating the shock sensor. As a result, the control unit starts a 10 second timer dedicated to the Shock Entry zone.

The user then opens the final exit door and the Final Exit zone door contact opens, starting the Entry timer. The control unit suspends the Shock Entry timer.

The user disarms the system before the Entry timer expires. The control unit stops all timers and does not generate an alarm.

During an intrusive entry, the intruder forces the final exit door and breaks its lock, activating the shock sensor. The control unit starts the Shock Entry timer as before.

The intruder opens the final exit door, opening the door contact. The control unit starts the Entry timer and suspends the Shock Entry timer.

The Entry timer expires, causing an alarm. This alarm does not contribute to alarm confirmation (see DD243 6.4.5).

The control unit resumes counting down the Shock Entry timer. At this point the intruder must trigger two non-entry route detectors in order to start a confirmed alarm. When the Shock Entry timer reaches zero the control unit counts this as the first non-entry alarm.

The intruder walks through the premises, and triggers another non-entry alarm. This forms the second alarm that the control requires in order to start a confirmed alarm.

The Shock Entry zone type is not liable to false alarms caused by casual impacts on the final exit/entry door. If, for example, the postman forces a large parcel through the letter box, triggering the shock sensor, then the control unit starts the Shock Entry timer.

However, when the timer expires, because the Entry timer never started (and so has not expired) the control unit does not start an alarm.

Note: For correct operation, you must also enable the following in Option 46:

Confirmation On.
After Entry Yes.
Confirm 2 zones.

Step 3 - Select Attributes

Each zone can have one or more of the following attributes to alter its operation.

1- Access

Normal Alm zones programmed with this attribute are automatically isolated during the entry or exit procedure to allow a "walk through" route to access the keypad or to exit. The Entry zone type (page 24) performs the same function.

You may also want to apply this attribute to a Final Exit zone type to prevent the "zone in fault triggered" tone when exiting.

2 - Double Knock

Zones programmed with this attribute will cause an alarm only if the zone is triggered a specified number of times within the Double Knock period (page 63), or the zone remains active for the whole of the Double Knock period.

The number of times the zone needs to be triggered is determined by the Double Knocks counter (page 65).

3 - Soak Test

This attribute is useful if you want to place a zone under test. The attribute enables you to find out whether activations of the zone have occurred, without the activations causing alarms.

After setting the attribute, the zone is isolated for the period specified by the Soak Test timer (page 63). If the zone is activated during this period, the activation is logged, outputs of type Soak Test Fail (page 45) are triggered and the user is informed of the zone failure after entering a user code. The test fail message is cleared only after entering the Engineer's code.

If at the end of the test period no activations have occurred, the control unit removes the attribute from the zone.

Note: The control unit resets the soak test time to zero whenever an engineer or installer logs in or applies power to the control unit.

4- Omittable

Zones with this attribute can be omitted from the setting procedure by using User option 1-2 (see the *Manager's Manual*). If the Automatic Omits configuration option is selected (page 85), zones that are active when the system is set are automatically omitted.

5 - Reset

This attribute is normally assigned to a zone that is connected to a vibration or smoke detector. The zone is not monitored for approximately 12 seconds during the exit procedure. This allows the sensor to stabilise, and prevents false alarms.

6 – Masking

Use this attribute only if the zone is a three-resistor zone used to detect sensor masking. Refer to page 26 for further information.

7 – Entry

Zones with this attribute start the Entry Delay timer (page 61) when the system is part set (i.e. not all wards are set) and respond as normal when full set. This attribute must be assigned to all zones that are required to start the Entry Delay timer in the part-set condition.

Note: Do not use this attribute in software version 3.01.xx onwards. Please use an Entry zone type and refer to Ward Attributes ~~1~~~~3~~~~2~~ option 16 (see page 38).

8 – Chime Tone 1

Zones with this attribute will cause the extension loudspeakers (connected to the control panel) and keypad sounders to generate a single two-tone "chime" sound if chimes are enabled for the zone's ward in User option 1-5 and the zone is triggered.

Chimes are generated at all keypad sounders and extension. However, using the Sndr Ctl output type (page 56), you can make keypad sounders produce only those sounds that are relevant to a specific ward.

If you select the Chime Visible configuration option (page 85), the keypad displays the zone number when a chime occurs.

Setting this attribute to YES automatically sets Chime Tone 2 and Chime Tone 3 to NO.

The attribute can also be set using User option 2-5.

9 – Chime Tone 2

This is similar to Chime Tone 1, but a double two-tone "chime" sound is generated.

Setting this attribute to YES automatically sets Chime Tone 1 and Chime Tone 3 to NO.

Chime Tone 3

This is similar to Chime Tone 1, but a triple two-tone "chime" sound is generated.

Setting this attribute to YES automatically sets Chime Tone 1 and Chime Tone 2 to NO.

Inverted

By default, a zone is "triggered" by opening the zone contacts. If the zone's Inverted attribute is set to YES, the zone triggers when the zone contacts close. Apply this attribute when monitoring normally open devices such as exit terminator buttons or pressure pads.

Shunable

Zones with this attribute are automatically shunted (Isolated) if:

A user chooses to shunt all zones in a selected ward using User option 1-3 (24 Hour zones only).

A user code of type Shunt is entered at the keypad (as set up in User option 2-4).

A Shunt Key zone is triggered (page 24).

Beam Pair

Zones with this attribute cause an alarm only if two or more zones that are in the same ward and have the Beam Pair attribute trigger within the time specified by the Beam Pair timer (page 64). This attribute is normally used only for areas protected by an array of infra-red beams, with each beam connected to a separate zone. Zones that have the Beam Pair attribute should be the same type (normally Normal Alm or Perimeter).

Monitored

When triggered, a zone with this attribute activates outputs that follow the Monitored O/P On (page 48) or Monitor (page 55) event.

Non Latching

Select this attribute for a zone of type Keyswitch (page 24), Shunt Key (page 24) or Security (page 27) if a non-latching switch is used (i.e. a switch where the contacts do not stay open after the key is operated).

Supervision

This attribute is for use with radio zones. If you wish to enable supervision for a radio zone then you must set both the supervision warning timer, (option **[1]-[5]-[2]** 27, see page 66). and the supervision failure time (option **[1]-[5]-[2]** 28, see page 66) to a figure greater than 0.

YES – The control unit monitors this zone for supervision (default).

NO – The control unit ignores all supervision problems with this zone.

Note: By default the supervision attribute is set to YES for all zones, including the hardwired zones. The control unit uses supervision monitoring on radio zones only, not on hardwired zones.

Activity

This attribute works together with Downloader to aid remote monitoring of individual zones. When enabled, the control unit sets an internal flag if the zone has been activated at any time within the last seven unsetting periods. Downloader can display the state of this flag and a remote engineer can use this information to judge the health of the detector for that zone. An installer on-site can also view the state of this flag by means of "View Zones" option **[2]-[1]**. The display shows an "A" if the zone has been active within the last seven unset periods.

YES – The control unit monitors this zone for activity.

NO – The control does not monitor this zone for activity (default).

Step 4 - Select Zone's Wards

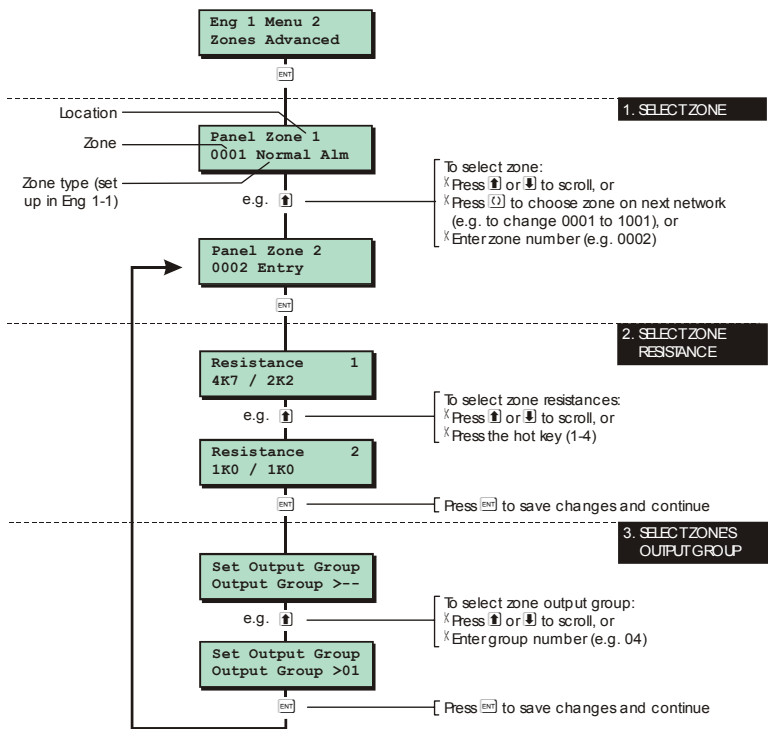
Each zone can be assigned to one or more wards.

If the Ward configuration option (page 84) is set to **ON**, Zones assigned to more than one ward will only be armed when all the wards they are in are set (by default this option is set to OFF).

Step 5 - Enter Zone Description

Each zone can have up to 16 characters of text assigned to it. The zone text is displayed in, for example, alarm messages displayed at the keypad. Refer to page 151 for details of how to enter text.

Option 1-2: Choosing Advanced Zone Options



This option enables you to select the resistance values used at the sensor, and to create output groups.

Step 1 - Select Zone Number

Choose the zone you want to set up by selecting its zone number (see page 21 for further details).

Step 2 - Select Zone Resistance

Select the resistance values used at the zone sensor. The first value is the alarm shunt resistance, and the second is the end-of-line resistance. If you are using a zone with masking (page 26), select 4K7/2K2.

This option is relevant only if the zone sensor is connected using the fully-supervised loop connection method, as described in the *Installation Instructions*. If the zone sensor is connected using closed circuit wiring then leave the option set to 4k7/2k2.

Step 3 - Select Zone's Output Group

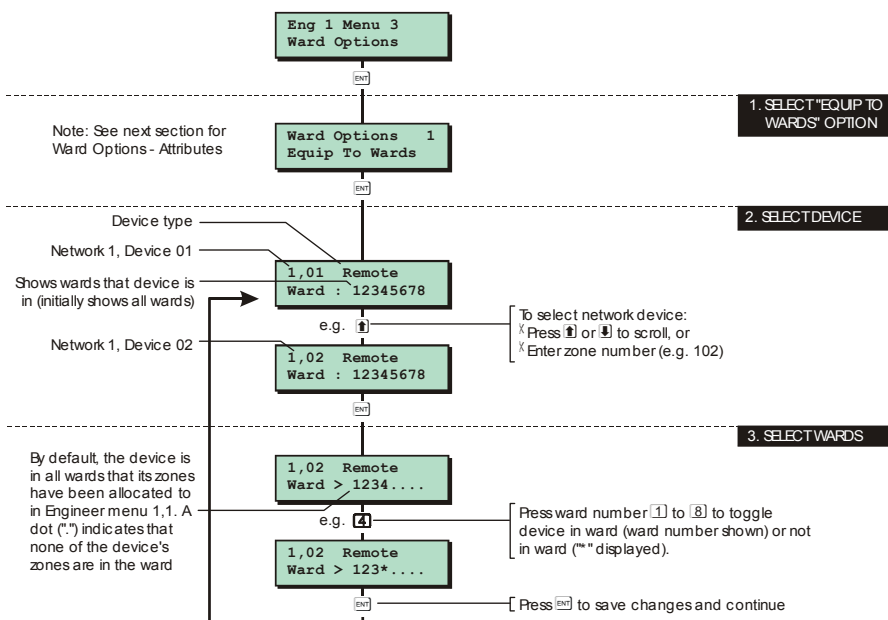
This option enables you to create "output groups". For example, assigning the zone to output group number 01 creates output group 01 and assigns the zone to it. One or more zones can belong to the same output group.

Output groups can be used in Engineer option 1-4 to allow an output to follow the status of the zones within the group (see page 43).

Enter "00" to clear the zone from all groups.

Option ①-③: Assigning Ward Equipment and Attributes

Option 1-3-1: Assigning Equipment to Wards



Use the Equip To Wards option to assign each keypad, MSNode, MSPSU, MIDNode/IDNode, MRNode and LEC2 to the appropriate wards. For the device type, choose **Remote** for a keypad, **MSNode** for an MSNode, **RNode** for an MRNode, or **Node** for an MIDNode/IDNode, LEC2.

It is important to allocate each device to the correct wards, since this will ensure correct responses from the system. For example:

If a tamper alarm occurs at a keypad, and the keypad is assigned to ward "n", then internal sounders operate (and the control unit communicates a "tamper" fault) if ward "n" is unset. If ward "n" is set, the alarm response is determined by option 1-8-4 (page 83).

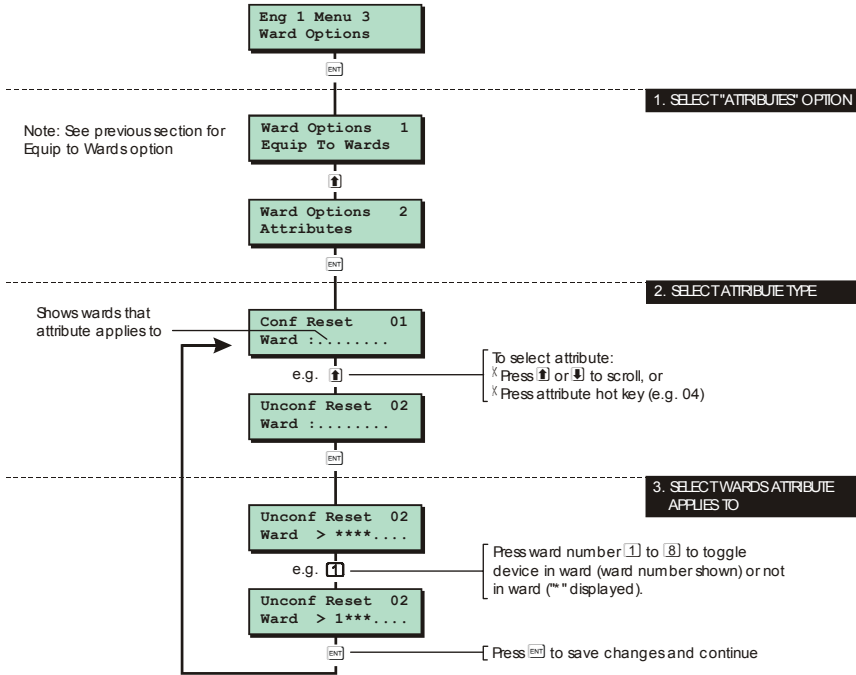
If a "Standard Ward" user code is assigned to ward "n" (user option 2-4), the user code will only be able to set and unset ward "n" from a keypad that is assigned to ward "n".

- ☞ *The control panel tamper, extension loudspeaker and external bell tamper can be assigned to wards using the Panel Tamper, Panel Speaker and Bell Tamp attributes (page 36).*
- ☞ *The bell and strobe can be assigned to wards using the Bell & Strobe attribute (page 37).*
- ☞ *Keypads and loudspeakers connected to an MSNode or MSPSU are automatically allocated to the same wards as the Node. The loudspeaker and keypad sounder follow the wards assigned to the Node. For example, if an MSNode is assigned to wards 2 and 3, the loudspeaker and keypad sounder will operate when ward 2 or 3 requires an entry, exit or*

alarm sounder. Using the Sndr Ctl output type (page 56), you can make keypad sounders produce only those sounds that are relevant to a specific ward.

☞ By default, the sounder in keypads connected directly to a network follow the wards assigned to the extension loudspeaker. For example, if the extension loudspeaker is assigned to wards 1 and 2, the keypad sounders operate when ward 1 or 2 requires an entry, exit or alarm sounder. However, using the Sndr Ctl output type (page 56), you can make keypad sounders produce only those sounds that are relevant to a specific ward.

Option 1-3-2: Defining Ward Attributes



The Attributes option allows you to assign attributes to wards to affect system behaviour. The following attributes are available:

01 – Conf Reset

If you select this attribute, an engineer or remote reset code must be entered to reset the system after a confirmed alarm (page 89) has been activated in the selected wards for at least the period specified by Abort Delay (page 64). If you deselect this option, any user who has access to the ward can reset the confirmed alarm. See also the Remote Reset attribute (page 36).

02 – Unconf Reset

If you select this attribute, an engineer or remote reset code must be entered to reset the system after an unconfirmed alarm (page 89) has been sounding in the selected wards for at least the period specified by Abort Delay (page 64). If you deselect this option, any user whose code is assigned to the ward can reset the unconfirmed alarm. See also the Remote Reset attribute (page 36).

03 – Tamper Reset

If you select this attribute, an engineer or remote reset code must be entered to reset the system after a tamper alarm occurs at a zone in the selected wards while the system is unset. If you deselect this option, any user who has access to the ward can reset the alarm. See also the Remote Reset attribute (page 36).

04 – Remote Reset

This is relevant only if the Conf reset, Unconf Reset or Tamper Reset attribute is set (see above). The Remote Reset attribute enables the panel to generate a code when resetting the system after an alarm in the selected wards. The user contacts an Alarm Receiving Centre (ARC) with the code, who (if satisfied with the caller's authority) return a one-off remote reset code, which the user enters to reset the panel. The *User's Guide* describes how to enter the remote reset code.

The algorithm used to generate the remote reset code is determined by the Reset Alg option (page 65). Contact your ARC to obtain the correct algorithm number.

05 – Panel Tamper

The control panel lid tamper can be assigned to any combination of wards. If a panel tamper occurs, keypads in the same ward will sound (see page 22), and Tamper outputs associated with the same ward (see page 55) will activate.

See also Tampers as Alarm / Tampers as Tamps (page 91).

06 – Panel Speaker

The control panel speaker can be assigned to any combination of wards. Assigning the speaker to the correct wards ensures that the sounders operate only when the relevant ward(s) require a sound (e.g. for an alarm, entry or exit sound).

07 – Aux/Bell Tamp

The auxiliary and bell box tamper input can be assigned to any combination of wards. If a bell tamper occurs, keypads in the same ward will sound (see page 22), and Tamper outputs associated with the same ward (see page 55) will activate.

See also Tampers as Alarm / Tampers as Tamps (page 91).

08 – Payment Timer

The payment timer can be assigned to any combination of wards. When the Payment Time (page 66) expires, the selected wards will require an engineer or remote reset (see the *User's Guide*) before the wards can be set.

09 – Re-arms

If you select this attribute, the ward can rearm zones that have been triggered, but which are now no longer in the alarm state at the end of the Bell Duration time (page 61). The number of times the zone can rearm is specified by the No. of Rearms timer (page 65).

☞ *This attribute applies only if Confirmation Off is selected (page 89).*

10 – Secure Ward

A Secure ward attempts to stay in a set condition. If the ward is unset, a "Hi Security Zone Is Unset" alert message is displayed and the Hi Security timer starts (page 66). The timer restarts each time a detector is triggered in the Secure ward. When the timer expires, the system attempts to set the ward automatically.

11 – Bell & Strobe

This option allows you to select which wards will trigger the external sounder (bell) and strobe outputs on the control panel. Refer to the Bell Delay and Bell Duration notes on page 61.

12 – Foyer Mode

This enables ward 1 to:

Set automatically when all wards selected in the Foyer Mode attribute have been set. For example if wards 2, 3 and 4 are selected, the system will automatically set ward 1 when the last of these wards is set.

Unset automatically when any one of the selected wards has been unset (with all the wards being previously set).

Ward 1 is intended to be a foyer area, which needs to set or unset automatically.

☞ *To prevent the foyer setting before that of the last ward selected for setting, you should ensure that the exit time of ward 1 (page 60) is greater than that of the other wards.*

☞ *Do not select ward 1 in the Foyer Mode option.*

☞ *Ward 1 can be configured to set instantly; see page 88.*

13 – Unset Fire

This attribute determines whether outputs that follow a Fire Alarm event (page 44 or 54) activate only when a Fire zone (page 23) is set, or when the zone is either set or unset.

If a ward has this attribute, a fire alarm from the ward will activate the outputs if the ward is set or unset. If a ward does not have this attribute, a fire alarm from the ward will activate the outputs only when the ward is set.

14 – Multiply Ack

This option allows you to designate which wards will use the Double Knock counter (page 65).

15 – Entry Unset

Use this option to specify which wards must first have their entry timer running, or be in alarm, before being unset, or which wards can be unset directly from a telecommand. If a ward appears in this list then a user must start the entry timer for the ward (for example by opening a Final Exit door). By default all wards appear in the list. If a ward does not appear in the list then a user can unset the ward directly from the telecommand. (See also Option **1-9-1-2 8**.)

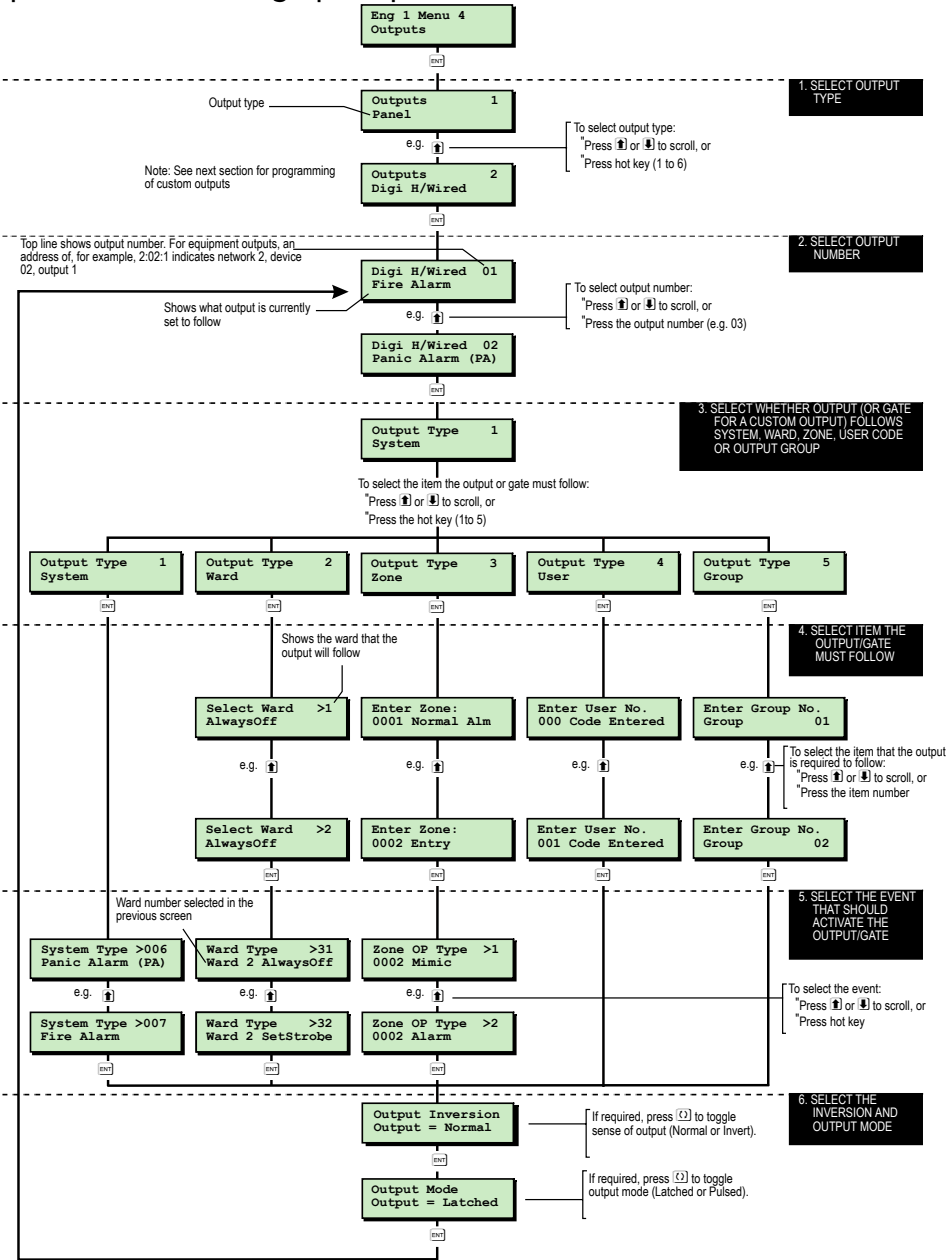
16 - Entry = F/E

This causes any zones programmed as type Entry (page 24) to be regarded as a Final Exit zone type when the ward is set. For example, if ward 2 is selected in the Entry=F/E, when a user sets ward 2 any Entry zone type in that ward will be immediately considered as a Final Exit zone type.

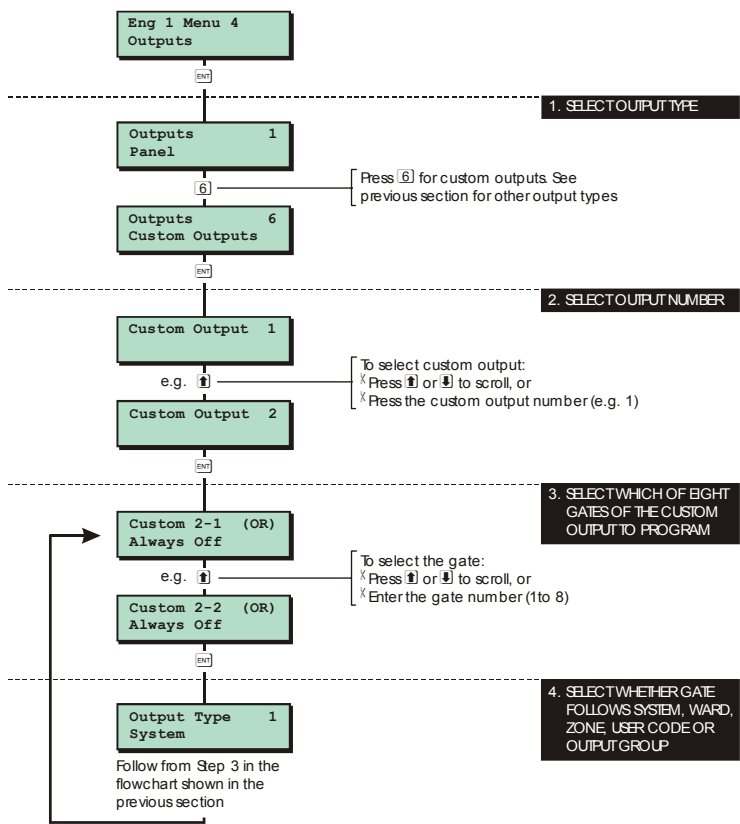
Typically, this option is used in domestic applications for a hall PIR that is used for two wards, e.g. ward 1 (set when leaving the building) and ward 2 (set when going to bed). If ward 2 (but not ward 1) is included in Entry=F/E, the hall zone is used as a Final Exit zone type when setting ward 2.

Note Zones programmed as Normal Alm with the Access attribute (page 28) will remain as walk through zones and are not affected by this option.

Option 1-4: Setting Up Outputs



Flowchart for custom outputs:



If you are using outputs from the control panel or its network devices, you need to use the Outputs option to specify the event that should cause the output to activate. For example, if you select the Fire Alarm event for an output, the output will activate when a Fire zone triggers.

Step 1 - Select Output Type

Select the type of output you want to set up:

1 – Panel

Select this option to set up output 1, 2, 3, 4 or 5 on the control panel PCB. Outputs 1 and 2 are relays (voltage-free contacts); outputs 3, 4 and 5 are transistor outputs. Please refer to the control panel's *Installation Instructions* for details of how these outputs operate and their electrical characteristics. Note that the M800 does not have outputs 3 and 5.

2 – Digi H/Wired

Select this option to set up any of the digital communicator outputs on the control panel PCB.

3 – Digi On Board

Select this option to set up any of the digi on-board "software" outputs, the status of which can be transmitted via the on-board modem port to an Alarm Receiving Centre (ARC). Digi On Board programming is relevant only if using the Fast Format (page 110); other communications formats use the data that is automatically added to the event log.

4 – Equipment

Select this option to set up outputs connected to a keypad, MSNode, MSPSU (or the obsolete MIDNode/IDNode).

5 – O/M Modules (obsolete)

Select this option to set up outputs connected to an output module (this connects to the output module port on the control panel's PCB).

6 – Custom Outputs

Custom outputs enable you to choose a combination of different events to trigger an output. To set up and use custom outputs:

1. Define the required logic behaviour of the custom output using the flowchart on page 40 and the notes below.
2. Assign a custom output event (page 51) to the required output. For example, if you have defined the logic behaviour for custom output 2, assign "Custom O/P 2 On" to the appropriate output (e.g. a panel output). The output will activate when the correct combination of events occur, as specified by the required logic behaviour.

Defining the logic behaviour

Each custom output has four logic gates, which you need to program. Gates 1 to 4 perform an OR function, and gates 5 to 8 perform an AND function (Figure 8). The custom output activates when either of the following occurs:

Any one of the events assigned to gate 1 to 4 occur (logical OR function).

All of the events assigned to gates 5 to 8 occur (logical AND function).

☞ *When programming a custom output, program any unused OR gates as "Always Off". Program unused AND gates as "Always On".*

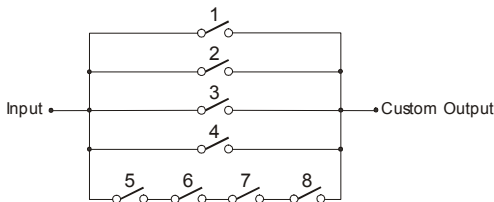


Figure 8) Logical operation of Custom Outputs

Example 1: The gates in custom output 1 have the following default settings. If the defaults are used, the custom output activates only when the system is full set **AND** there is an alarm.

OR GATES		AND GATES	
1	Always Off	5	System Full Set
2	Always Off	6	System Full Set
3	Always Off	7	Alarm
4	Always Off	8	Alarm

Example 2: The gates in custom output 2 have the following default settings. If the defaults are used, the custom output activates only when the system is full set **AND** there is a confirmed alarm.

OR GATES		AND GATES	
1	Always Off	5	System Full Set
2	Always Off	6	System Full Set
3	Always Off	7	Confirmed
4	Always Off	8	Confirmed

Example 3: The following example shows how to program a custom output to enable it to activate when a monitored power supply reports a "PSU - Power" event **AND** a selected ward is set.

OR GATES		AND GATES	
1	Always Off	5	PSU - Power
2	Always Off	6	Set (Ward option 08)
3	Always Off	7	Set (Ward option 08)
4	Always Off	8	Set (Ward option 08)

Step 2 - Select Output Number

Select the output of the chosen type to set up. For example, if you have chosen to set up a Panel output, select whether to set up output 1, 2, 3, 4, or 5.

NOTE:

The programmable output available on the keypad PCB is electronically linked to the lower LED on the display. The LED is active when the output is active. There is a jumper link "LED mimic" on the keypad pcb that you can remove if you wish the lower LED to stay dark.

By default the keypad output is programmed as "Pending". This means that it becomes active if there are two (or more) alerts pending.

When connected to an MSNode, the keypad output follows one of the two outputs on the MSNode. To program the function of the keypad output you must program the function of one or other of the MSNode outputs.

To select which output the keypads will follow:

Give the keypad an even address (2 or 4) to follow output 2.

Give the keypad an odd address (1 or 3) to follow output 1.

Note that the zones on keypads attached to MSNodes do not provide extra zones over and above the eight zone provided by the MSNode.

Step 3 - Select Which Item the Output Follows

At this stage select the general type of event that should activate the output (you can select specific types in Step 4):

1- System

The output activates when an event relating to the status of the alarm system in general occurs.

2 - Ward

The output activates when an event relating to a specific ward occurs.

3 - Zone

The output activates when an event relating to a specific zone occurs.

4 - User

The output activates when a specified user enters their user code. The operation of the output depends on whether Timed code o/p or Latched code o/p is selected (page 86).

5 - Zone Output Group

The output will follow the status of a specified zone output group (page 33). The output is activated if any of the zones in the group are triggered.

Step 4 - Select Ward, Zone, User or Zone Output Group Number

If appropriate, select the particular ward, zone, user or zone output group the output should follow.

Step 5 - Select Event to Activate Output

If you have chosen the output to follow a ward, zone or the system, you need to select the event that should activate the output.

System Output Types

The following events are applicable if you have chosen the output to follow the system:

000 - Bell (SAB)

Activates when the control panel bell output is on, and deactivates when the control panel bell output is off. The bell output may be activated on a confirmed or unconfirmed alarm, depending on whether Bells on Confirm or Bells on Unconf is selected (page 90).

001 - System Strobe

Activates when the control panel strobe output is on; deactivates when the control panel strobe output is off.

002 – Switch 12 Volts

Activates when any ward is set; deactivates when any ward goes into alarm or its Entry Delay timer (page 61) is running, or when all wards are unset. This output is normally used as an input to latching detectors.

003 – Detector Reset

Deactivates for approximately 4 seconds when a user code is entered to set the first ward. The output is used to reset latching detectors (smoke detectors, shock sensors, etc.).

004 – Walk Test

Activates when a walk test is carried out (User option 1-1-2; see the *Manager's Manual*); deactivates when the walk test is finished.

005 – Alarm

Activates when any ward has a full alarm (page 22); deactivates when all such wards have been reset.

006 – Panic Alarm (PA)

Activates when any PA Silent or PA Audible zone (page 23) triggers, or if a user code of type Panic Code is used. The output deactivates when all such alarms have been reset.

007 – Fire Alarm

Activates when any Fire zone (page 23) triggers. The Unset Fire attribute (page 37) determines whether the output activates only when the zone is set, or when the zone is either set or unset. The output deactivates when all Fire alarms have been reset.

008 – System Set

Activates when any ward is set; deactivates when all wards are unset.

009 – System Full Set

Activates when all wards are set; deactivates when any ward is unset.

010 – System Open

Activates when the system is unset; deactivates when any part of the system is set.

011 – Confirmed

Activates when there is a confirmed alarm (page 89), and remains active until the system is reset.

012 – Courtesy Light

Activates for the duration of the Courtesy Time (page 64) when any ward has the Entry Delay timer (page 61) running, or if any keypad is operated.

013 – Engineer On Site

Activates when the engineer's code is entered; deactivates when the engineer is logged off.

014 – Active Omit

If a latching sensor (such as a door contact or break glass, but NOT a PIR) activates a zone, and the zone remains active until the end of the confirmation time (page 62), the control panel omits the active zone and triggers the Active Omit output. The control panel deactivates the output when a user resets the system.

015 – Zones Omitted

Activates when any zone is omitted (e.g. by user option 1-2); deactivates when all zones have the omits removed.

016 – 24 Hour Omitted

Activates when any 24 Hour zone is manually omitted; deactivates when all omitted zones are reinstated.

017 – 24 Hour Alarm

Activates when any 24 Hour zone (page 22) goes into the alarm state if the panel is unset, and deactivates when all 24 Hour alarms have been reset.

018 – Zones Shunted

Activates when any shunt group (page 122) is omitted; deactivates when the shunt group is reinstated.

019 – Technical

Activates when any Technical zone (see page 23) triggers; deactivates when the alarms have been reset.

020 – PSTN Line Fault

Activates when a line fault is detected between the on-board modem and the Alarm Receiving Centre (ARC); deactivates when the telephone line is restored. The Line Fault communications option (page 119) must be enabled for this output to activate when there is a line fault.

021 – Panel Mains Power Off

Activates when the mains power is removed from the control panel; deactivates when the mains power is restored.

☞ *The AC Off Delay timer (page 63) determines how long the mains must be off before the output activates.*

022 – Access Code

If the Access Code Only configuration option is set (page 87), this output activates when a user code of type Access is entered. If the Access All Codes configuration is set (page 87), this output activates when any valid user code is entered. The output deactivates one second later if the output is latched, or for the length of the pulse if the output is pulsed.

023 – Soak Test Fail

Activates when any zone undergoing a "soak test" (page 28) triggers; deactivates when reset by the engineer.

024 – First Knock

Activates when any double knock zone (page 28) activates for the first time; deactivates when the zone is activated for the second time, when the system is reset or when the double-knock timer has expired (page 63).

025 – Digi Failed

Activates when the built-in modem fails to communicate. This is otherwise known as "Comms Fail".

026 – Digi Successful

Activates when the built-in modem communicates successfully.

027 – Digi Active

Activates when the built-in modem is activated; deactivates when the built-in modem has finished communicating.

028 – 2nd Entry Only

Activates when any ward starts the 2nd Entry Dly timer (page 63); deactivates when the second entry time expires.

029 – Entry Only

Activates when any ward starts its Entry Delay timer (page 61); deactivates when the ward is unset or when the Entry Delay timer expires.

030 – Exit Only

Activates when any ward starts the exit procedure; deactivates when the ward is set.

031 – Exit / Entry

Activates when any ward is in entry or exit mode.

032 – Exit Fault

Activates when a zone is in a fault condition during the setting procedure (e.g. a zone that does not have the Access attribute is activated); deactivates when the fault is no longer present.

033 – Tamper Alarm

Activates when any type of tamper condition is triggered; deactivates when all tamper conditions have been reset. This output acts as a "global" tamper indication for any type of tamper.

034 – Rem Service Call

Activates when the system is online with a remote PC and the Downloader software.

035 – Code Accepted

Activates after any valid user code has been entered. The output deactivates one second later if the output is latched, or for the length of the pulse if the output is pulsed.

036 – Service Required

Activates when the Service Time (page 64) has expired; deactivates when the engineer code is entered.

037 – Reset Required

Activates when the system requires an engineer or remote reset; deactivates when the system is reset either by the engineer or by a remote reset.

038 – Strobe On Set

Activates when there is an alarm, and deactivates when the alarm is reset by the user. This output is also active for 10 seconds after a user sets the system.

039 – Duress Alarm

Activates when a duress code is entered (as set up in User option 2-4); deactivates when the duress alarm is reset.

040 – System Part Set

Activates when not all wards are set; deactivates when all wards are set or unset.

041 – LockSet Unlocked

Active when a Lock Set zone (page 25) is unlocked; deactivates when all Lock Set zones on the system are locked.

042 – Set Failed

Activates when any ward fails to set (e.g. because a zone is active); deactivates when the set fail condition is reset.

043 – Shunt Code

If the output is latched, the output activates for 2 seconds when a shunt code (as set up in User option 2-4) is entered. If the output is pulsed, it activates for the duration of the pulse.

044 – Random Output On

Activates randomly (between 5 and 60 minutes).

045 – Modem Lockout

Activates when the modem is locked-out (four failed attempts); deactivates when a Manager user code is entered or after 4 hours.

046 – Aux/Bell Tamper

Activates when the bell tamper is triggered; deactivates when the alarm is reset.

047 – Panel Lid Tamper

Activates when the panel lid tamper is activated; deactivates when the alarm is reset.

048 – Chime Mimic

Activates for 2 seconds when any zone with a Chime Tone attribute (page 29) is activated, if chimes are enabled in User option 1-5.

049 – Monitored O/P On

If the output is latched, the output activates when a zone that has the Monitored attribute (page 30) is activated and deactivates when the zone deactivates. If the output is pulsed, it activates when a zone that has the Monitored attribute activates and remains active for the pulse duration.

050 – Alarm Abort

Activates after an alarm has been aborted by the user; deactivates when the Abort Period timer (page 63) has expired, or when the alarm is reset (whichever occurs first).

051 – Rem Call Enabled

Not used.

052 – Relearn Required

Activates when the system needs an engineer to confirm the devices attached to the panel's network ports (e.g. after a new device is attached); deactivates when the relearn has been performed.

053 – Always On

Active at all times.

054 – Always Off

This output never activates.

055 – Battery Test On

Activates during a battery test. The test starts when an engineer logs out, and lasts for approximately 10 seconds. If required, the output can be used by the battery test input of a monitored power supply.

056 – Battery Fault

Activates when the backup battery in the panel is not charging or has a low voltage.

057 – PSU - Battery

Activates while a PSU Battery zone (page 26) is active.

058 – PSU - Fuse

Activates while a PSU Fuse zone (page 26) is active.

059 – PSU - Power

Activates while a PSU Power zone (page 26) is active.

060 – General Fault

Activates when there is a general fault. A general fault occurs if one of the following occurs.

Panel mains fail

Remote PSU mains fail

Mains fail panel/MSPSU

PSU Battery zone (page 26) active

PSU Fuse zone (page 26) active

Panel Battery Fault

Remote PSU Battery Fault

Battery Fail panel/remote PSU

Remote PSU power out fail

Panel Aux fuse fail

PSU Power zone (page 26) active	Panel Bell fuse fail
Masking	Network fuse fail
ID Loop Short	Digi Failed (page 46)
Fault 4k4	PSTN Line fail
Supervision fail	Jamming
Transmitter battery low	Telecommand battery low
External Line fail (page 49)	

061 – Mask Tamper

This is applicable only if the Mask Unset Tamp or Mask Set Tamper option is selected (page 93). The output activates when a masking condition has been detected (see page 26) and clears when the alarm is reset. The Anti Mask timer (page 63) delays activation of the output.

062 – Mask Fault

This is applicable only if the Mask Unset Fault or Mask Set Fault option is selected (page 93). The output activates when a masking condition has been detected (see page 26) and clears when the alarm is reset. The Anti Mask timer (page 63) delays activation of the output.

63 – Mask Alarm

The control unit operates this output when a suitably equipped detector reports masking.

64 – 4k4 Fault Output

The control unit operates this output when a suitably equipped detector reports a self test failure by triggering a resistance value of 4k4 ohms.

065 – Pending

Activates when more than one alert condition needs to be reset.

066 – Always Off

067 – Ext. Line Fault

Activates when there is +12Vdc at the LINE FLT input on the control panel.

068 – ATS Test

This output type is available for Panel and Digi H/Wired outputs and should be used only for connection to the ATS Test input of a dual-path communicator, such as a RedCARE Subscribed Terminal Unit (STU). A dual-path communicator can communicate with an ARC using a landline, or if this is not available, through a GSM (mobile) connection.

The Line Fault output of the communicator must connect to the LINE FLT input of the panel and must be able to provide +12Vdc. For example, if the Line Fault output at the communicator uses a relay, connect the common terminal of the relay to +12Vdc and the normally-open terminal to the LINE FLT input of the panel.

The ATS Test output pulses when +12Vdc is first applied to the LINE FLT input. This requests the communicator to signal, by pulsing the LINE FLT input, whether both or only one of the communicator's networks are in a line fault condition. The panel generates an "ATE L.F. Single" alert if only one of the networks is not available, or "ATE L.F. All" if both

networks are not available. If a single-path communicator is used (which does not require the ATS Test output from the panel), applying a constant +12Vdc to the LINE FLT input of the panel generates an "ATE L.F. All" alert.

 *Invert the sense of the output at the panel if a "positive applied" input sense is used at the communicator. The Normal/Pulsed output mode (page 59) is not used for the ATS Test output type.*

069 – Ready to Set

This output is intended for connection to a card or prox tag reader installed outside the protected area. The output can be used to drive a "Ready to Set" led so that a user can see the state of the system before attempting to arm it. The output is active when there are no resets pending, all wards have all their zones closed, and no wards are set already.

070 – Auxiliary Fuse

Activates when the panel's auxiliary 12V fuse is blown.

If you want to use this event for a output that is powered by the panel, the output must be configured so that its normal state is "on" to indicate the presence of power, and "off" means power is off. If you are using a switched-negative digital communicator output, this means that the sense of the output must be inverted. Note that the communicator must be powered from a different source for the power failure to be communicated.

071 – Bell Fuse

Activates when the polyfuse protecting the bell output fuses.

072 – Network 1 Fuse

Activates when the polyfuse protecting the Network 1 output fuses. Do not use this event for outputs connected to any device on network 1.

073 – Network 2 Fuse

Activates when the polyfuse protecting the Network 2 output fuses. Do not use this event for outputs connected to any device on network 2.

074 to 079 – Always Off

This output never activates.

080 – Rem Batt Fault

This activates when there is battery fault at any MSPSU.

081 – Rem Mains Off

This activates when mains power switches off at any MSPSU.

082 – Rem Pwr Out Flt

This activates when the voltage from any MSPSU power supply is too high or too low. This may indicate excessive loading (voltage too low).

083 – Sys Batt Fault

This activates when there is a fault with the battery in the control panel or any MSPSU.

084 – Sys Mains Fault

This activates when mains power switches off at the control panel or in any MSPSU.

085 to 099 – Always Off

This output never activates.

100 – Auto-Setting

Activates for 1 minute prior to any ward being set automatically by an auto-set timer (page 70). Note that if the user defers setting then the output remains on for the duration of the deferred set period.

101 to 108 – Always Off

These outputs never activate.

109 – PC Output 1 On

This output is controlled by a PC running the Downloader software.

110 – PC Output 2 On

This output is controlled by a PC running the Downloader software.

111 – PC Output 3 On

This output is controlled by a PC running the Downloader software.

112 – PC Output 4 On

This output is controlled by a PC running the Downloader software.

113 to 118 – Always Off

This output never activates.

119 – Custom O/P 1 On

Activates when custom output 1 (page 41) activates.

120 – Custom O/P 2 On

Activates when custom output 2 (page 41) activates.

121 – Custom O/P 3 On

Activates when custom output 3 (page 41) activates.

122 – Custom O/P 4 On

Activates when custom output 4 (page 41) activates.

123 – Custom O/P 5 On

Activates when custom output 5 (page 41) activates.

124 – Custom O/P 6 On

Activates when custom output 6 (page 41) activates.

125 – Custom O/P 7 On

Activates when custom output 7 (page 41) activates.

126 – Custom O/P 8 On

Activates when custom output 8 (page 41) activates.

127 to 128 – Always Off

This output never activates.

129 – Time Switch 1 On

Activates while time switch 1 (page 66) is active.

130 – Time Switch 2 On

Activates while time switch 2 (page 66) is active.

131 – Time Switch 3 On

Activates while time switch 3 (page 66) is active.

132 – Time Switch 4 On

Activates while time switch 4 (page 66) is active.

133 – Time Switch 5 On

Activates while time switch 5 (page 66) is active.

134 – Time Switch 6 On (not M800)

Activates while time switch 6 (page 66) is active.

135 – Time Switch 7 On (not M800)

Activates while time switch 7 (page 66) is active.

136 – Time Switch 8 On (not M800)

Activates while time switch 8 (page 66) is active.

137 – Time Switch 9 On (not M800)

Activates while time switch 9 (page 66) is active.

138 – Time Switch 10 On (not M800)

Activates while time switch 10 (page 66) is active.

139 to 148 – Always Off

These outputs never activate.

149 – Supervision Fail

This output operates when there is a supervision failure on any radio zone. The output remains on until the alert is reset. See also option **1-9-3-17**.

The control unit operates the General Fault System Output at the same time as the Supervision Failed System Output.

150 – RF Jammed

The control unit operates this output when any MRNode reports jamming. The output remains on until all jammed MRNodes report no jamming.

The control unit operates the General Fault System Output at the same time as the RF Jammed System Output.

151 – Tx Low Battery

The control unit operates this output when any MRNode reports a wirefree detector with low battery. (There is a separate output type for Telecommands and PAs.) The output remains on until all MRNodes stop reporting detectors with low batteries.

The control unit operates the General Fault System Output at the same time as the TX Low Battery System Output.

152 – Telecommand Low Battery

The control unit operates this output when any MRNode reports a telecommand or PA with low battery. The output remains on until all MRNodes stop reporting telecommands or PAs with low batteries.

The control unit operates the General Fault System Output at the same time as the Telecommand Low Battery System Output.

153 – Set Pulse

The control unit switches this output on for 10 seconds when a user sets any ward.

154 – Unset Pulse

The control unit switches this output on for 10 seconds when a user unsets any ward.

Ward Event Output Types

The following events are applicable if you have chosen the output to follow a specific ward:

00 – Bell-SAB

Activates when the selected ward is in alarm and the control panel bell output is on, and deactivates when the bell output is off. The bell output may be activated on a confirmed or unconfirmed alarm, depending on whether Bells on Confirm or Bells on Unconf is selected (page 90).

01 – Strobe

Activates when the selected ward is in alarm and the control panel strobe output is on; deactivates when the selected ward is reset.

02 – Switch 12

Activates when the selected ward is set; deactivates when the selected ward is in alarm, its Entry Delay timer (page 61) is running or the ward is unset. This output is normally used as an input to latching detectors.

03 – Det. Reset

Deactivates for approximately 4 seconds when a user code is entered to set the first ward. The output is used to reset latching detectors (smoke detectors, shock sensors, etc.).

04 – Walk Test

Activates when the selected ward is walk tested (User option 1-1-2); deactivates when the walk test is exited.

05 – Alarm

Activates when the selected ward has a full alarm (page 22); deactivates when the alarm has been reset.

06 – P.A. Alarm

Activates when a PA Silent or PA Audible zone (page 23) triggers, or if a user code of type Panic Code is used. The output activates only if the zone or user code belongs to the selected ward. The output deactivates when all such alarms applicable to the ward have been reset.

07 – Fire Alm.

Activates when any Fire zone (see page 23) that is in the selected ward triggers. The Unset Fire attribute (page 37) determines whether the output activates only when the zone is set, or when the zone is either set or unset. The output deactivates when all Fire alarms in zones associated with the ward have been reset.

08 – Set

Activates when the selected ward is set; deactivates when the selected ward is unset.

09 – 2nd Entry

Activates when the selected ward's 2nd Entry Dly timer is running (page 63).

10 – 24Hr Alm.

Activates when a 24 Hour zone (page 22) in the selected ward goes into the alarm state if the panel is unset; deactivates when the alarm is reset.

11 – Cnf Alarm

Activates when a confirmed alarm (page 89) is detected by a zone in the selected ward, and remains active until reset.

12 – Zone Omit

Activates when any zone in the selected ward is omitted or shunted (e.g. by user option 1-2 or 1-3); deactivates when all zones in the selected ward have the omits/shunts removed.

13 – Act. Omit

If a latching sensor (such as a door contact or break glass, but NOT a PIR) activates a zone in the selected ward, and the zone remains active until the end of the confirmation time (page 62), the control panel omits the active zone and triggers the Active Omit output. The control panel deactivates the output when a user resets the system.

14 – 24Hr Omit

Activates when the selected ward has one or more 24 Hour zones omitted; deactivates when the selected ward has all its 24 Hour zones reinstated.

15 – Set Fail

Activates when the selected ward fails to set (e.g. because a zone is active); deactivates when the selected ward is reset.

16 – Settling

Activates when the Exit Settle timer (page 63) is running for the selected ward.

17 – Clear

Activates when the selected ward has no tamper conditions and no zones activated. The output deactivates when the selected ward has a tamper or zone activation.

18 – Tamper

Activates when any type of tamper condition is triggered in the selected ward; deactivates when all tamper conditions have been reset in the ward. This output acts as a "global" tamper indication for any type of tamper associated with the ward.

19 – Reset Req

Activates when the selected ward requires an engineer or remote reset; deactivates when the ward has been reset either by the engineer or by a remote reset.

20 – Lock-Out

Activates when a security key (page 27) has locked out keypads in the selected ward; deactivates when the Security zone type is no longer active.

21 – Chime On

Activates when any zone in the selected ward causes a chime tone, as determined by the Chime Tone attribute (page 29).

22 – Monitor

If the output is latched, the output activates when a zone that has the Monitored attribute (page 30) and is in the selected ward activates, and deactivates when the zone deactivates. If the output is pulsed, it activates when a zone that has the Monitored attribute and is in the selected ward activates, and remains active for the pulse duration.

23 – Alm Abort

Activates after an alarm in the selected ward has been aborted by the user; deactivates when the Abort Period timer (page 63) has expired, or when the alarm is reset (whichever occurs first).

24 – Entry

Activates when the Entry Delay timer (page 61) is running for the selected ward; deactivates when the selected ward is unset or when the Entry Delay timer expires.

25 – Exit

Activates when the selected ward starts the exit procedure; deactivates when the selected ward is set.

26 – Exit/Ent.

Activates when the selected ward is in entry or exit mode.

27 – Exit Flt

Activates when a zone in the selected ward is in a fault condition during the setting procedure (e.g. a zone that does not have the Access attribute is activated); deactivates when the fault is no longer present.

28 – Sndr Ctl.

Activates when a sound is required at a keypad assigned to the selected ward. For example, for the Entry Delay or Exit timer (page 60) or an alarm condition.

By default, if a keypad is connected to an MSNode or MSPSU, it produces sounds for any ward assigned to the Node (page 34). Keypads connected directly to the network produce sounds for any ward assigned to the panel's extension loudspeaker (page 35). This output type is used to ensure that a keypad produces sounds only for the ward selected for the output.

To use this feature, assign the Sndr Ctl output type to the output of the relevant keypad and fit the jumper across the "WARD SNDR" link in the keypad (see the *Keypad Installation Instructions*). Assign the Node/loudspeaker to all used wards. The keypad sounder will operate only when the output is switched on, i.e. when a sound is required for the specified ward.

29 – Perimeter

Activates when the selected ward has a Perimeter zone (page 25) in alarm; deactivates when the alarm is reset.

30 – Shunted

Activates when the selected ward has one or more zone shunted (by User option 1-3); deactivates when the zones are reinstated.

31 – AlwaysOff

Never activates.

32 – SetStrobe

Activates when there is an alarm in the selected ward, and deactivates when a user resets the alarm. The control panel also activates this output for 10 seconds after a user sets the ward.

33 – Access

If the Access Code Only configuration option is set (page 87), this output activates when a user code of type Access assigned to the selected ward is entered. If the Access All Codes option is set (page 87), this output activates when any valid user code assigned to the selected ward is entered. The output deactivates one second later if the output is latched, or for the length of the pulse if the output is pulsed.

34 – LS Open

Active when a Lock Set zone (page 25) in the selected ward is unlocked.

35 – PSU Batt

Activates while a PSU Battery zone (page 26) in the selected ward is active.

36 – PSU Fuse

Activates while a PSU Fuse zone (page 26) in the selected ward is active.

37 – PSU Mains

Activates while a PSU Power zone (page 26) in the selected ward is active.

38 – Mask Tamp

This is applicable only if the Mask Unset Tamp or Mask Set Tamper option is selected (page 93). The output activates when a masking condition has been detected in the selected ward (see page 26). The Anti Mask timer (page 63) delays activation of the output.

39 – Mask Flt

This is applicable only if the Mask Unset Fault or Mask Set Fault option is selected (page 93). The output activates when a masking condition has been detected in the selected ward (see page 26). The Anti Mask timer (page 63) delays activation of the output.

40 – Mask Alarm

The control unit operates this output when a suitably equipped detector reports masking in its associated ward.

41 – Security

Activates when the selected Secure ward (page 37) is unset; deactivates when the Secure ward is set.

42 – Supervision Fail

This output operates when there is a supervision failure on any radio zone allocated to the ward programmed for this output. The output remains on until all supervision failures for the ward are reset (see also option **1-9-3** 17).

Note that to give a reliable indication of the location of the fault, you must assign each MRNode to the appropriate ward (option **1-3-1**), and each radio zone to the appropriate ward (option **1-1**).

43 – RF Jammed

The control unit operates this output when any MRNode reports jamming. The output remains on until all jammed MRNodes report no jamming.

44 – Transmitter Low Battery

The control unit operates this output when any MRNode reports a wirefree detector with low battery. (There is a separate output type for Telecommands and PAs.) The output remains on until all MRNodes stop reporting detectors with low batteries.

45 – Telecommand Battery Low

The control unit operates this output when any MRNode reports a telecommand or PA with low battery. The output remains on until all MRNodes stop reporting telecommands or PAs with low batteries.

46 – Set Pulse

The control unit switches this output on for 10 seconds when a user sets any ward.

47 – Unset Pulse

The control unit switches this output on for 10 seconds when a user unsets any ward.

48 – 4k4 Fault

The control unit operates this output when a suitably equipped detector allocated to the ward reports a self test failure by triggering a resistance value of 4k4 ohms.

49 – Ward (n) Ready Set

This output is intended for connection to a card or prox tag reader installed outside the protected area. The output can be used to drive a "Ready to Set" led so that a user can see the state of the ward before attempting to arm it. The control unit operates this output when all the zones assigned to the selected ward are inactive (closed). If any zone opens, then the control unit deactivates the output.

Zone Event Output Types

The following events are applicable if you have chosen the output to follow a specific zone:

1 – Mimic

Activates when the selected zone is active; deactivates when the selected zone is not active. The output can follow any zone, including those that are "Not used".

Depending on whether Mimic, All Times or Mimic Set Only is selected (page 87), the output may mimic the zone only if the zone is in a set ward.

2 – Alarm

Activates when the selected zone causes a full, local or internal alarm (page 22); deactivates when the alarm has been reset.

3 – Tamper

Activates when the selected zone is in tamper (irrespective of whether the zone's ward is set); deactivates when tamper is reset.

4 – Test Fail

Activates when the selected zone is triggered while on soak test (page 28); deactivates when the engineer enters the engineer code.

5 – Omit

Activates when the selected zone is omitted or shunted (User option 1-2 or 1-3); deactivates when the selected zone has the omit/shunt removed.

User Events

Use this option to activate an output whenever a specific user keys in their access code (see page 39 for instructions).

Zone Output Group Events

Use this option to activate an output whenever a user operates a zone output group (see pages 33 and 39 for instructions).

Step 6 - Select the Inversion and Output Mode

Output Inversion

Selecting this option inverts the sense of the output.

Output Mode

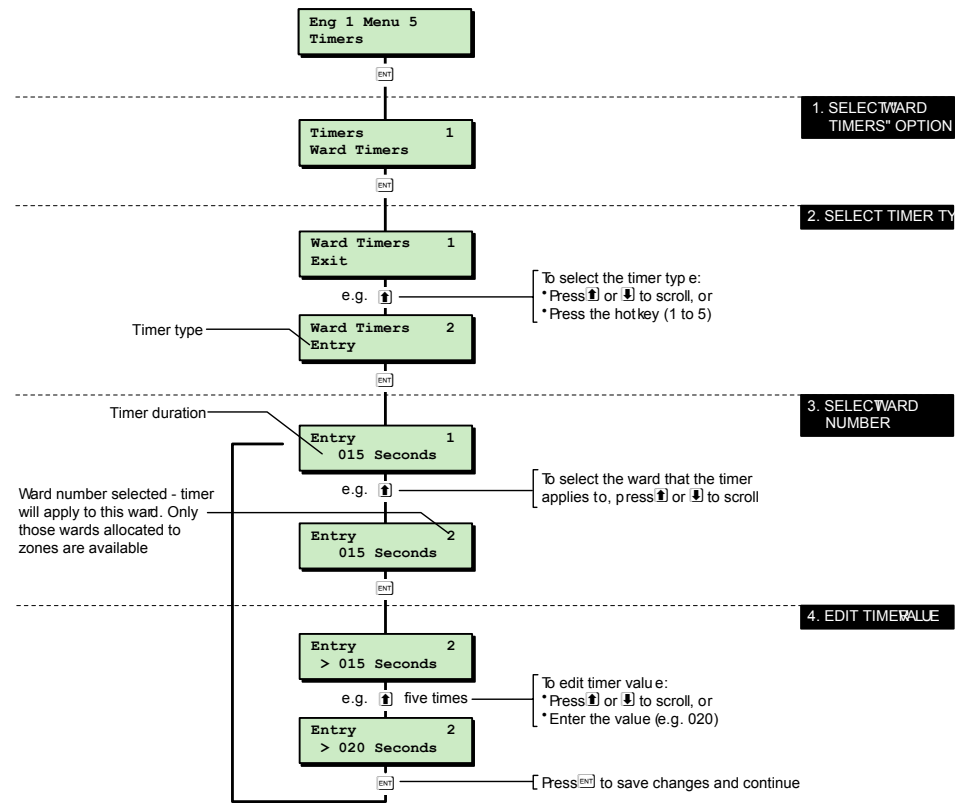
 *Output Mode is not available for certain outputs types.*

The normal mode is Latched.

Selecting Pulsed causes the output always to return to its normal state after the specified number of seconds. This can result in the output returning to the normal state sooner than if the Latched mode is selected.

Option 1-5: Setting Up Timers

Option 1-5-1: Setting Up Ward Timers



The Ward Timers option enables you to set up time periods that relate to wards, such as the entry and exit times.

- The timers specified in option 1-8-3 (page 82) are used when wards are set via a ward group.*
- It is possible to have different entry and exit times for each ward. Therefore, if for example, more than one ward is set at the same time, different exit times may apply for each ward.*

Ward Timer Types

In step 2, choose the timer type (for defaults see page 133):

1 – Exit

This determines the time allowed to exit a ward once the option to set it has been made. The exit time is used by, for example, the Timed Exit setting mode (page 76).

2 – Entry Delay

When the ward is set and the entry procedure is initiated, either by activation of the Final Exit zone (page 23) or by activation of a Normal Alm zone that has the Entry attribute (page 29) set to Yes, the Entry Delay timer starts to count down. The timer should allow the user sufficient time to enter a valid user code after entering the building. If a valid user code has not been entered when the timer reaches zero, an internal alarm (page 22) is generated and the 2nd Entry Dly timer (page 63) is started. If the 2nd Entry Dly timer reaches zero, a full alarm is generated, unless overridden by option 1-8-4 (page 83).

3 – Bell Delay

When a full alarm is triggered for the selected ward, activation of the external bell and strobe outputs can be delayed by the value of this timer. This timer or Sys Bell Dly (page 62) is used, depending on the setting of the Ward Bell Time/Global Bell Time configuration option (page 86).

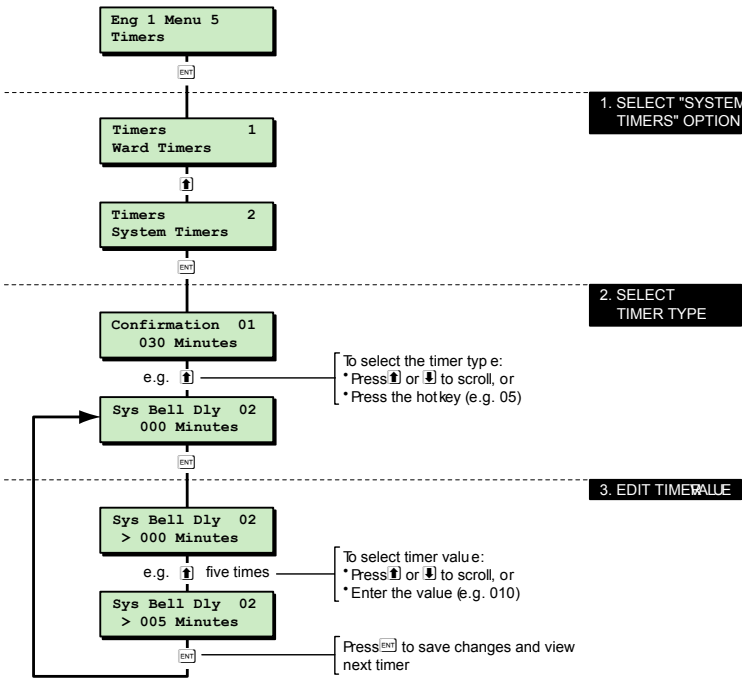
- ☞ *The Bell & Strobe ward attribute (page 37) determines which wards trigger the bell and strobe outputs.*
- ☞ *Bell Delay or Sys Bell Dly are considered to be zero if Bells on Unconf (page 90) is selected.*

4 – Bell Duration

When the Bell Delay for the selected ward has expired, the duration of the external bell output can be controlled by the value of this timer. This timer or Sys Bell Dur (page 63) is used, depending on the setting of the Ward Bell Time/Global Bell Time configuration option (page 86).

- ☞ *If Confirmation On and Bells on Unconf are selected (page 89), the bell and strobe outputs switch off and the system re-arms if a second zone does not trigger within the Confirmation time (page 62). If a second zone does trigger, causing a confirmed alarm, the bell output (but not the strobe) is switched off when the Bell Duration or Sys Bell Dur timer has expired. Bell Duration and Sys Bell Duration are started after any programmed bell delays.*

Option 1-5-2: Setting Up System Timers



The System Timers option enables you to set up time periods and counters that relate to the whole system, such as entry and exit delays, bell duration and the number of "knocks" required for alarm activation.

System Timer Types

In step 2, choose the timer type (for defaults see page 133):

01 – Confirmation

This timer is relevant only if the Confirmation On option is selected (page 89). A confirmed alarm occurs only if the two zones trigger within the time period specified by this timer. If the second zone is not triggered within this time period, the sounders and strobe are cancelled, overriding the Bell Duration (page 61) or Sys Bell Dur (page 63) time, and the system re-arms (isolating any zones that are still triggered).

02 – Sys Bell Dly

When a full alarm is triggered, activation of the external bell and strobe outputs can be delayed by the value of this timer. This timer is used only if the system is full set and the Global Bell Time configuration option is selected (see page 86). Otherwise, the ward Bell Delay timer (page 61) is used.

☞ *Bell Delay or Sys Bell Dly are considered to be zero if Bells on Unconf (page 90) is selected.*

03 – Sys Bell Dur

When the Sys Bell Dly has expired, the duration of the external bell output can be controlled by the value of this timer. This timer is used only if the system is full set and the Global Bell Time configuration option is selected (see page 86). Otherwise, the ward Bell Duration timer (page 61) is used.

04 – Anti Mask

A masking zone or a zone that has a masking status (page 26), must remain active for the duration of the Anti Mask timer for a masking alert or masking outputs to activate.

05 – Line Fault

This timer delays the audible line fault indication when a telephone line fault occurs. The display and any PSTN Line Fault outputs (page 45) are not affected.

06 – AC Off Delay

This timer delays the AC Mains Fault alert and outputs programmed as Mains Power Off (page 45) when the mains power is removed.

07 – Soak Test

This timer determines the length of time that a Soak Test (page 28) is applied to a zone. If the timer is set to 000, zones will remain on test until the Soak Test attribute is removed.

08 – Exit Settle

Detectors that are on the exit route sometimes take several seconds to settle after activation. This timer is used to provide a delay to ensure that detectors used by Final Exit (page 23) or Exit Terminator (page 23) zones are not still active when the panel sets the ward.

09 – 2nd Entry Dly

When a ward Entry Delay timer (page 61) has expired, the 2nd Entry Dly timer starts to count down. If at the end of this time the ward has not been unset, a full alarm (page 22) is generated for the relevant ward, unless overridden by option 1-8-4 (page 83).

10 – Double Knock

This is the "Double Knock" time window in which a specified number of zone activations must occur to generate an alarm condition, or the zone must remain active for the whole duration of this time to generate an alarm condition. This applies only to zones that have the Double Knock attribute (page 28).

The number of zone activations needed is determined by the Double Knocks counter (page 65).

11 – Abort Period

This timer controls the duration of the output types Alarm Abort (system output, page 48) or Alm Abort (ward output, page 55).

12 – Abort Delay

This timer is relevant for certain alarm conditions that require an engineer or remote reset. If a user silences the alarm within the Abort Delay time period, the alarm will not require an engineer or remote reset. When an alarm occurs, the Alarm Abort (page 48) or Alm Abort (page 55) output is activated only if the system is unset within this period. If the system is unset after this period, the output is not activated.

13 – Courtesy time

This timer is used to control the duration of Courtesy Light outputs (page 44).

14 – Menu Time-Out

This timer controls how long a user option remains displayed before timing out and returning the system to the normal standby screen that shows the current date and time.

15 – Beam Pair

This is the time window in which two zones with the Beam Pair attribute (page 30) must activate for the system to generate an alarm condition.

16 – Defer Setting

This setting is relevant to auto-set timers (page 70). The Defer Setting timer specifies the number of minutes that the control unit defers auto-setting once a user enters a valid access code.

At a pre-determined interval before a ward auto-sets, keypad sounders operate to warn users that the ward is about to set. Entering a user code during this warning time defers auto-setting for the time specified by Defer Setting timer. The length of the warning interval before the ward auto-sets is controlled by the A.Set Warning timer (see page 66).

17 – Service Time

The installation company may use this timer to periodically generate "SERVICE REQUIRED" message so that the user is reminded that a service call is required. The users may continue to set and unset the system. When the engineer attends the site and enters the engineer code, the message is cleared. The service timer is re-started when the engineer re-selects this timer option. To disable this feature set the timer to 000.

18 – Select Menu

This timer determines how long the prompt to select user levels is displayed after a user code is entered. Once the timer has expired, then:

EITHER a) The panel attempts to set any unset wards that the user code has been programmed to auto-set (User option 2-4).

OR b) If the user code has no auto-set wards then the display shows the ward selection menu for 10 seconds. If the user does not enter a selection the display reverts back to the time and date.

19 – Keys Till Tamp

The value of this counter determines how many illegal key presses a user can enter before the control unit recognises a code tamper. Once the control unit recognises a code tamper it locks out the keypad for five minutes and logs a code tamper event.

20 – No. of Rearms

At the end of the Bell Duration time (page 61), the system rearms all zones that have been triggered, but which are now no longer in the alarm state. Zones that are still triggered are isolated. This counter controls the number of times that a zone can be armed before it is isolated.

☞ *This timer applies only if Confirmation Off is selected (page 89), and only for zones in a ward selected by the Re-arms attribute (page 37). Refer to page 62 for details of how the system re-arms if Confirmation On is selected.*

21 – Remote Resets

This counter determines how many "Remote Resets" can occur before the system locks into engineer reset only. When the engineer attends the site and enters the engineer code, the counter is restored to its original value. The Remote Reset feature can be selectively applied to wards; see page 36.

22 – Double Knocks

This counter is used only for wards selected by the Multiply Ack attribute (page 37). The counter determines how many "knocks" are needed within the Double Knock period (page 63) to cause an alarm at a zone that has the Double Knock attribute (page 28). If a ward is not selected to use this counter, two activations are required.

23 – Tst Call Strt

Specify a value for this timer only if you want on-board modem to make automatic test calls to an Alarm Receiving Centre (ARC) at fixed intervals. These are known as "static" test calls. The panel will make the first test call at the time you specify for Tst Call Strt, then at fixed intervals specified by the Test Call Int timer. For example, if you specify 003 for Tst Call Strt, and 010 for Test Call Int, the panel will make the first test call at 03:00, then the next calls at 13:00, 23:00, 09:00, 19:00, etc.

24 – Test Call Int

If you have specified a value other than zero for Tst Call Strt, this timer sets the fixed interval (in hours) between automatic test calls to an Alarm Receiving Centre (ARC).

If Tst Call Strt is zero, Test Call Int specifies the maximum period of time between calls to an Alarm Receiving Centre (ARC). The on-board modem automatically performs a test call if it has not made another type of call to the ARC within this period of time. This is known as "dynamic" test call.

Setting the value to zero prevents static or dynamic test calls from being made.

25 – Reset Alg.

This is applicable only if the Remote Reset attribute is set for a ward (page 36). The Reset Alg option is a 3-digit number that identifies the algorithm used to generate the remote reset code. An alternative algorithm can be selected, but this must correspond to the algorithm used by the Alarm Receiving Centre (ARC), otherwise the code returned will be incorrect.

If the value of Reset Alg is greater than 20, a 6-digit seed code is generated, and the remote reset code returned is 6 digits.

26 – Payment Time

Not available in software version 3.11.07

27 – Hi Security

This timer determines the length of time that a secure ward (page 37) can remain unset before the system automatically attempts to set it. When a secure ward is unset, activation of any zone in that ward resets the timer.

28 – Supervision Warning

When set to 000 this timer disables all supervision warnings. When set to a positive number between 001 and 999 this timer specifies the period in minutes that the control unit waits after receiving a supervision signal from a transmitter. The control unit re-starts the timer every time it receives a supervision signal from a transmitter. If the timer expires before the next supervision signal is received then the control unit starts a supervision warning and logs the event. The user can override the warning when setting the system.

The default setting for this timer is 16 minutes.

29 – Supervision Fail

When set to 000 this timer disables all supervision failures. When set to a positive number between 001 and 999 the timer specifies in minutes the period that the control unit waits after receiving a supervision signal from a detector. The control unit re-starts the timer every time it receives a supervision signal from a transmitter. If the timer expires before the next supervision signal is received then the control unit starts a supervision failure, logs the event, and generates an alert.

The default value is 120 minutes (suitable for EN50131 systems).

On an EN50131 compliant system the detectors should transmit every four minutes.

30 – Set Status

This timer works in when Option **[1] - [9] - [3] - [2] 0** is set to Timed (see page 95). When set to 000 this timer stops the keypad showing the set/unset status after a the control unit has completed setting a ward. When set to a positive number (and Option **[1] - [9] - [3] - [2] 0** is set to Timed) then the keypad displays the set/unset status for the number of seconds you select. If you set Option **[1] - [9] - [3] - [2] 0** to Never or Always then this time has no effect.

31 – Defer Count

This option specifies the maximum number of times that a user can defer an auto-set. You can specify any number in the range 000 to 999. See page 70 for a description of setting up auto-set timers.

32 – A.Set Warning

This option specifies the Auto-Set Warning time in minutes. You can enter any number between 1 and 255. Use this option in conjunction with the Defer Setting timer, see page 64.

Options 1-5-3 to 1-5-5: Calendar Timers

With software version 3.11.xx the time switches and auto set timers work in a completely different way to earlier versions.

Overview

Options 1 - 5 - 5 and 1 - 5 - 4 allow you to set up Time Switches and Auto Set timers. Time Switches operate outputs that you have programmed as Time Switch outputs (see page 52). Auto-Set timers set and unset selected wards at times that you specify. Both types of timer repeat at given times of day and selected days of the week.

Specify the outputs controlled by the timers by using Engineer option 1 - 4 .

You can also use Option 1 - 5 - 3 to specify times when the action of Time Switches and Auto-Set timers should be suspended. These events are called "Exceptions". An Exception has a start time and date, and an end time and date. Exceptions repeat once a year. Any of the Time Switches or Auto Set times can be allocated to one or more Exceptions.

The three control unit types have the following capacities:

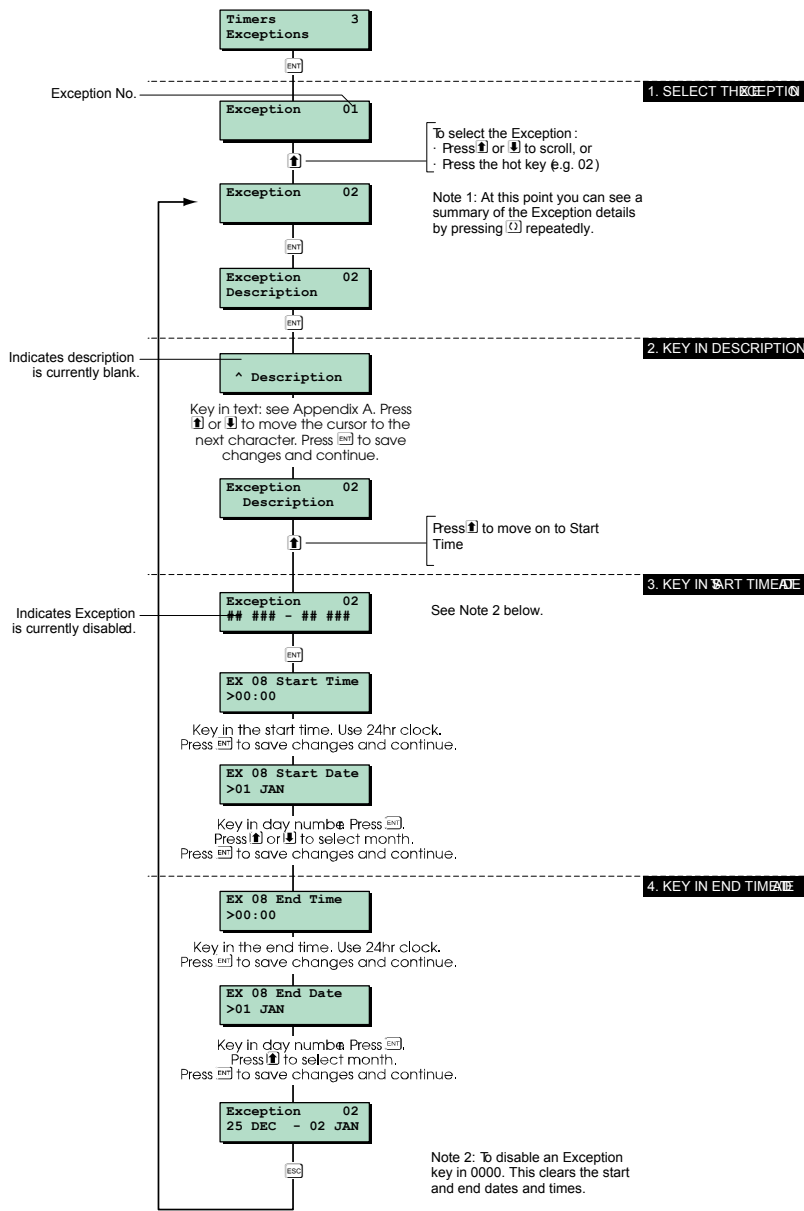
	M1000/M2000	M800	Comments
Time Switches	10	5	Each with three sets of on and off times.
Auto Sets	16	8	Each of which can be allocated to any ward.
Exceptions	30	30	

To help keep track of what the Time Switches, Auto Set timers and Exceptions are intended for, the control unit allows you to give each item a short text description. The keypad shows this description when you scroll through summary displays within Options 1 - 5 - 3 to 1 - 5 - 5.

The user can also program calendar timers from User option 2 - 0. Refer also to the Defer Setting timer (option 1 - 5 - 2 -16) and the Defer Count (see page 66).

The following pages describe how to set up Time Switches and Auto Set Timers. If you have any periods where you do not wish these timers to operate then program them using Exceptions. To make programming easier program your Exceptions first, so that they will be available while you are setting up the timers.

Option 1-5-3 : Exceptions



Use the following steps and the flowchart to program an exception:

Step 1 - Select the Exception

The number at the top right shows the currently selected Exception. Use the  and  The keys to select the Exception you wish to set up. Once you have selected an Exception, you can see an overview of its details by pressing  repeatedly. To start editing an Exception press .

Step 2 - Key in a Description

The description can be up to 16 characters long. See Appendix A for instructions on how to key in text. When the text is complete, press . Press  to move on to the Start Time.

Step 3 - Key in the Start Time and Date

The bottom line of the display shows the current start and end date of the selected Exception. If the display shows "## ### - ## ###" then the Exception is disabled.

Press  to begin editing the Start Time.

Key in the start time in 24 hour format (hours then minutes). Press .

Key in the day of the month. Use leading zeroes for days 01 to 09, Press .

Use the  or  key to select the month. Press  to save your changes and move on to the End Time.

Step 4 - Key in the End Time and Date.

Key in the end time in 24 hour format (hours then minutes). Press .

Key in the day of the month. Use leading zeroes for days 01 to 09. Press .

Use the  or  key to select the month. Press  to store the details you have entered.

The display shows the start and end dates.

Press  to return to Step 1 so that you can select another Exception.

To Clear (Disable) an Exception

Use the  and  keys to select the Exception you wish to clear and press .

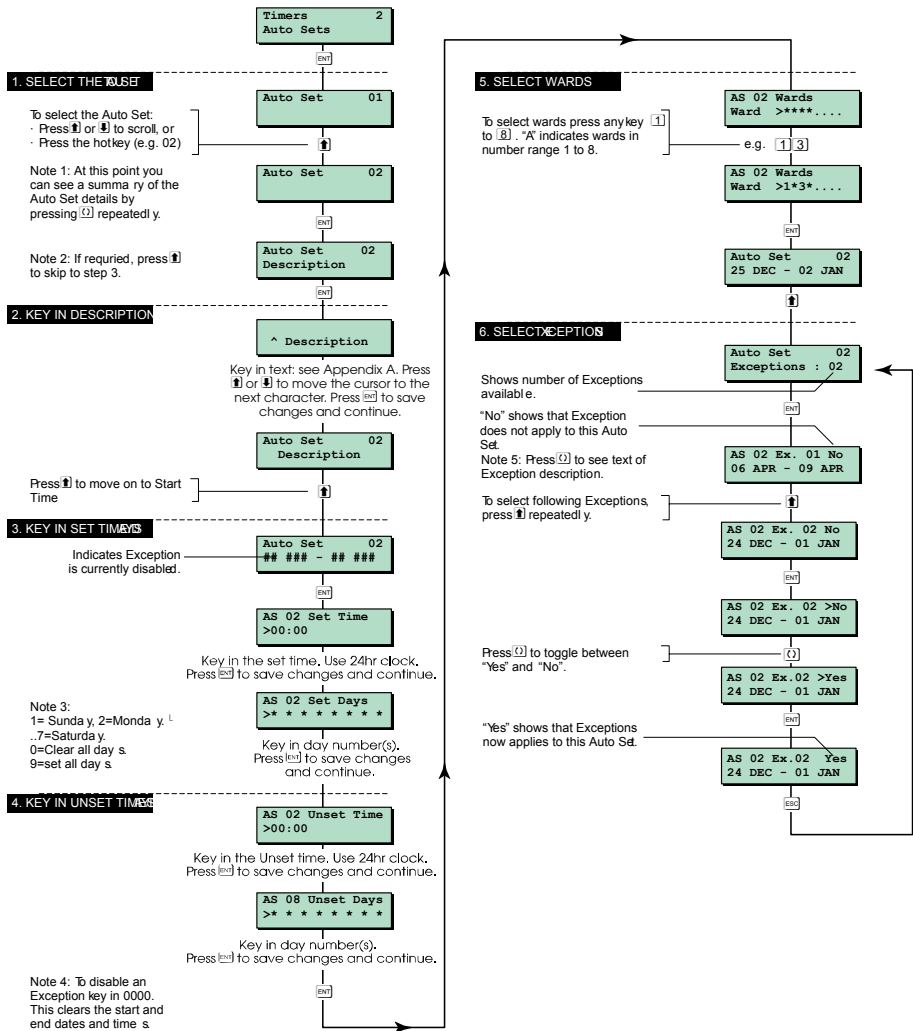
Key in    . The display shows ## ### - ## ###.

Press .

The control unit disables the Exception. Note that the control unit also changes the description to "Disabled".

Option 1-5-4: Auto Sets

This option enables you to define up to 16 Auto-Set timers. You must associate each timer with one or more wards, which the control unit will set and unset at the specified times. While setting up an Auto Set you can select any Exceptions that you have already programmed.



Note: If you specify a start time that is close to the current time shown by the control unit clock (less than the number of minutes held in the A.Set Warning timer, Option 1-5-2-32, see page 66), then the Auto Set will not take action until the following start day.

Step 1 - Select an Auto Set

Press **↑** or **↓** to select an Auto Set timer. If you wish, you can key in the number of the Auto Set timer to select it directly (use leading zeroes for timers 1 to 9). Once you see the required Auto Set timer on the display you can show a summary of its details by pressing **↵** repeatedly.

Press **ENT** to start editing the timer.

(At this point, if you do not wish to key in a description, you can skip to step 3 by pressing **↑**.)

Step 2 - Key in the Auto Set Description

When the bottom line of the screen shows "Description" press **ENT** once more.

Key in the text of the description. See Appendix A for instructions on how to key in text. When the text is complete, press **ENT**. Press **↑** to move on to Set Time/Days.

Step 3 - Key in Set Time/Days

If the bottom line of the screen shows "## ## - ## ##" then the timer is disabled. Press **ENT** to start editing the setting time.

Key in the start of the setting time in 24 hour format (hours then minutes). Press **ENT** to save changes.

Press any number 1 to 7 in order to specify the days of the week on which to start setting. Note that 1 = Sunday, 2 = Monday and so on until 7 = Saturday. If you wish to specify every day of the week press 9. If you wish to clear all the days of the week press 0. Press **ENT** to save your changes.

Step 4 - Key In the Unset Time/Days

Key in the unsetting time in 24 hour format (hours then minutes). Press **ENT** to save changes.

Press any number 1 to 7 to specify the days of the week on which to unset (see step 3).

Press **ENT** to save your changes.

Step 5 - Select Wards.

Key in any number 1 to 8 to specify wards 1 to 8. The display shows a "*" for wards that will not set. Press **ENT** to save your changes.

Step 6 - Select Exceptions

Press **↑** to move on to selecting Exceptions. The bottom of the display shows the number of Exceptions currently allocated to the Auto Set.

Press **ENT** to change the Exceptions allocated to the current Auto Set timer. The top right corner of the display shows "No" if the Exception does not apply to the Auto Set timer, and "Yes" if it does. (Press **↵** if you want to see a description of the Exception.)

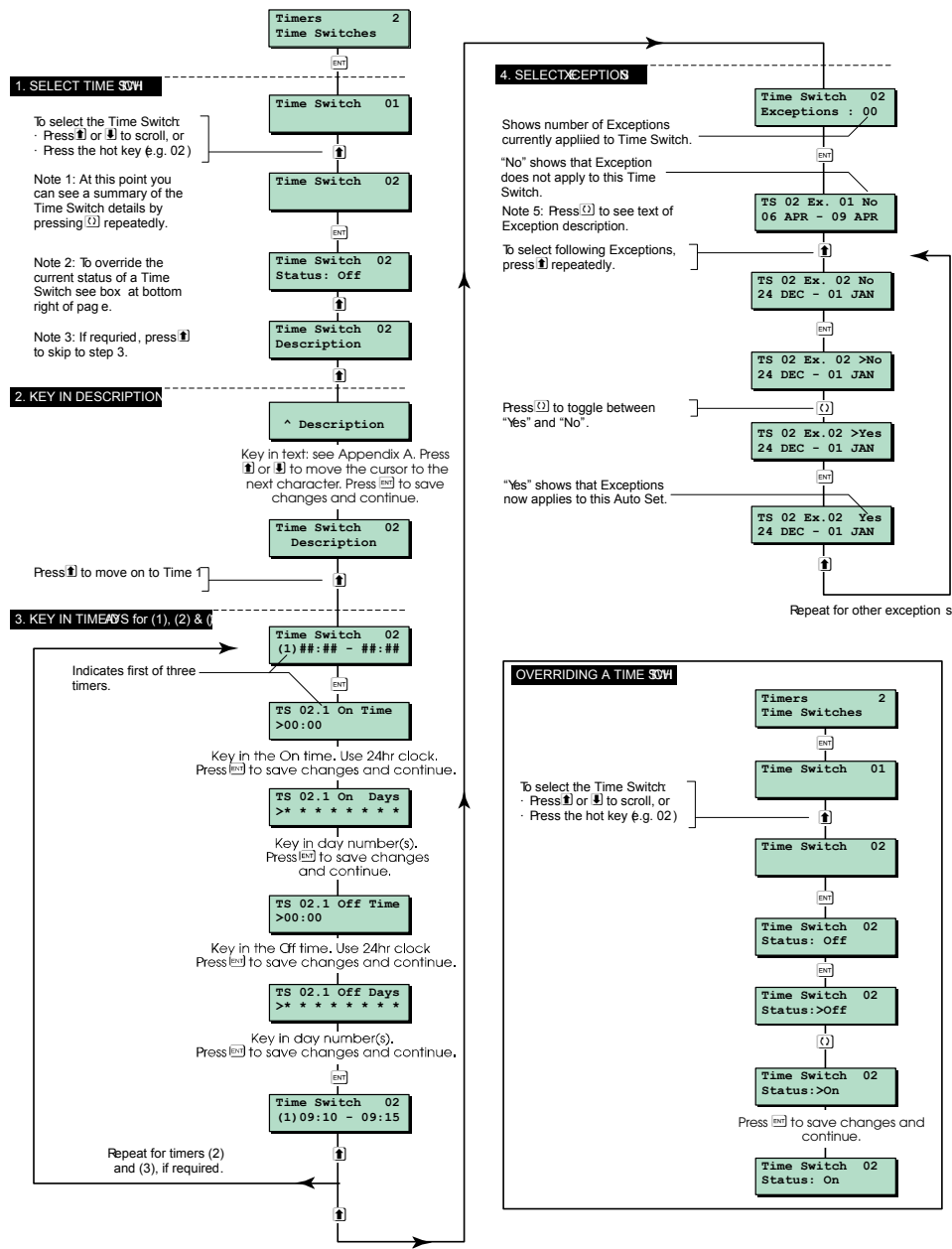
Press **↑** to select the Exception you wish to apply.

Press **ENT** to display a cursor next to the "No".

Press **↵** to change the "No" to a "Yes". (If you change your mind press **↵** again.). Press **ENT** to save your changes.

Press **ESC** to leave applying Exceptions. Press **ESC** again if you have finished editing the current Auto Set timer.

Option 1-5-5: Defining Time Switches



Use the following steps and the flowchart to set up Time Switches:

Step 1 - Select the Time Switch

Press **↑** or **↓** to select a Time Switch. If you wish, you can key in the number of the Time Switch to select it directly (use leading zeroes for timers 1 to 9). Once you see the required Time Switch on the display you can show a summary of its details by pressing **↵** repeatedly.

Press **ENT** to start editing the Time Switch.

(At this point, if you do not wish to override the Time Switch's current status or key in a description, you can skip to step 3 by pressing **↑** twice.)

Step 2 - Key in Description

When the bottom line of the screen shows "Description" press **ENT** once more.

Key in the text of the description. When the text is complete, press **ENT**. Press **↑** to move on to specifying the On and Off Time/Days.

Step 3 - Key in Time/Days for Timers (1), (2) & (3)

There are three independent on/off timers for each Time Switch. The top line of the display shows the number of the timer as digit after a decimal point following the number of the Time Switch. For example, the first of the three timers for Time Switch 1 is "TS 01.1", the second is "TS 01.2".

If the bottom line of the screen shows "## ### – ## ###" then the timer is disabled. Press **ENT** to start editing the setting time.

Key in the start of the setting time in 24 hour format (hours then minutes). Press **ENT** to save your changes.

Press any number 1 to 7 in order to specify the days of the week on which to start setting. Note that 1 = Sunday, 2 = Monday and so on until 7 = Saturday. If you wish to specify every day of the week press 9. If you wish to clear all the days of the week press 0.

Press **ENT** to save your changes.

Step 4 - Select Exceptions

Press **↑** to move on to selecting Exceptions. The bottom of the display shows the number of Exceptions currently allocated to the Time Switch.

Press **ENT** to start allocating any of the pre-programmed Exceptions to the current Time Switch. The top right corner of the display shows "No" if the Exception does not apply to the Time Switch, and "Yes" if it does. (Press **↵** if you want to see a description of the Exception.)

Press **↑** to select the Exception you wish to apply.

Press **ENT** to display a cursor next to the "No".

Press **↵** to change the "No" to a "Yes". (If you change your mind press **↵** again.). Press **ENT** to save your changes.

Press **ESC** to leave applying Exceptions. Press **ESC** again if you have finished editing the current Time Switch.

Overriding a Time Switch’s Status

At any time you can change the status of a Time Switch: if it is On you can turn it Off, and if it is Off you can turn it On. To do this:

Select Option **[1]** - **[5]** - **[5]** .

Press **[↑]** or **[↓]** to select a Time Switch. If you wish, you can key in the number of the Time Switch to select it directly (use leading zeroes for timers 1 to 9).

Press **[ENT]** to start editing the Time Switch.

The bottom line of the display shows “Status:” and the word “On” or “Off”.

Press **[ESC]** again.

The display shows a “>” cursor just after the work “Status:”.

Press **[↵]** to change the status. (Press **[↵]** a second time if you change your mind.) The control unit changes the status of the output.

Press **[ENT]** to save your changes.

Example: Auto Setting

Staff work normal office hours from Monday to Friday. The panel needs to be unset at 8am from Monday to Friday; the panel need to be set at 7pm on those same days. There are bank holidays at April the 1st and Christmas.

Configuration:

Config		Value
Auto-Set Timer 1	Unset Time	08:00 hrs
	Unset Days Of Week	Mon, Tues, Wed, Thurs, Fri
	Set Time	19:00 hrs
	Set Days Of Week	Mon, Tues, Wed, Thurs, Fri
	Ward List	1
	Exception periods	01, 02
Exception period 01	Start Date	1 st Apr
	StartTime	00:01
	End Date	1 st Apr
	End Time	23:59
Exception period 02	Start Date	25 th Dec
	Start Time	00:01
	End Date	2 nd Jan
	End Time	00:01

Actions:

During the normal working week:

Day	Time	Auto-Set Timer Action
Fri	19:00 hrs	Set
Mon	08:00 hrs	Unset
Mon	19:00 hrs	Set
Tues	08:00 hrs	Unset
Tues	19:00 hrs	Set
Wed	08:00 hrs	Unset
Wed	19:00 hrs	Set

Day	Time	Auto-Set Timer Action
Thurs	08:00 hrs	Unset
Thurs	19:00 hrs	Set
Fri	08:00 hrs	Unset
Fri	19:00 hrs	Set
Mon	08:00 hrs	Unset

At April 1st

Day	Date	Time	Auto-Set Timer Action
Fri	29 th Mar	19:00 hrs	Set
Tues	2 nd Apr	08:00 hrs	Unset

At Christmas:

Day	Date	Time	Auto-Set Timer Action
Mon	24 th Dec	19:00 hrs	Set
Wed	2 nd Jan	08:00 hrs	Unset

Option **1-5-6**: Defining Code-Lock Timers

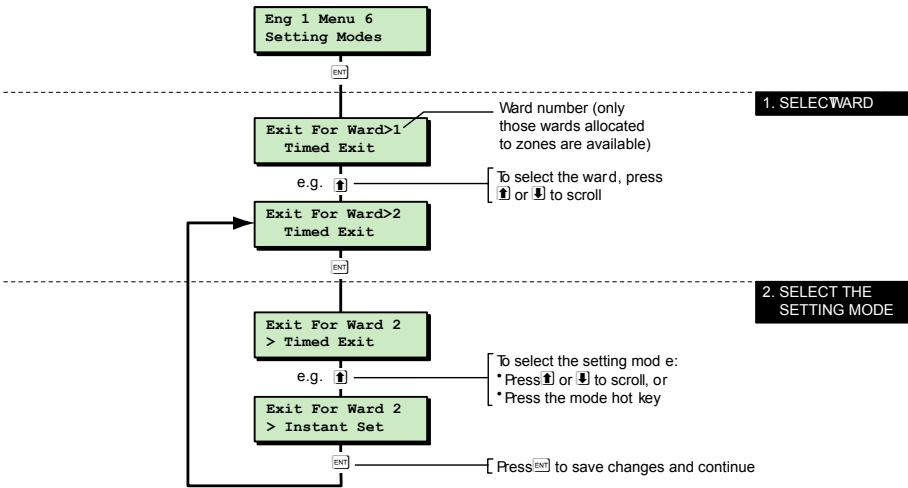
This option enables you to define up to eight code-lock timers, each of which is associated with up to ten users. The timer prevents the system from accepting the users' access codes at specified times.

You can define each code lock to have one switch on (codes not accepted) and one switch off (codes accepted) time. You can also choose the days of the week on which each of the eight timers operate.

If a user enters their user code while the code-lock timer is on, the display shows "Sorry. Your code is locked out".

The option is also available from User option 2-0-4. Please refer to the *Manager's Manual* if you need details of how to define code-lock timers.

Option 1-6: Defining the Setting Mode



This option determines the events that must take place before the panel arms the selected ward. Each ward can have a different setting.

The setting specified in option 1-8-2 (page81) is used when wards are set via a ward group.

1 – Final Exit

Select this option if you want the ward to set once the user has chosen to set the ward and activated a Final Exit zone (page 23). The panel sets the ward after the number of seconds specified by the Exit Settle time (page 63).

2 – Exit Terminate

Select this option if you want the ward to set once the user has chosen to set the ward and activated an Exit Terminator zone (page 23). The panel sets the ward after the number of seconds specified by the Exit Settle time (page 63).

3 – Timed Exit

Once the user has chosen to set the ward, this option causes the ward to set after the number of seconds specified by the Exit time (page 60).

The Exit Settle time (page 63) is included within the Exit time. Therefore, if the Exit time is, for example, 30 seconds and the Exit Settle time is 10 seconds, the Exit Settle period starts 20 seconds into the Exit period. The minimum period that the panel can set the ward is after 10 seconds (this would be used if, for example, you set the Exit time to zero).

Activation of an Exit Terminator zone (if used) can shorten the period for the ward to set. For example, if the Exit Terminator zone is triggered 5 seconds into the Exit period, and the Exit Settle time is 7 seconds, the zone is set 12 seconds after the user has chosen to set the ward.

4 – Instant Set

Select this option if you want the ward to set quickly.

The ward sets 10 seconds after the user has chosen to set the ward (which should be enough time for sensors to settle).

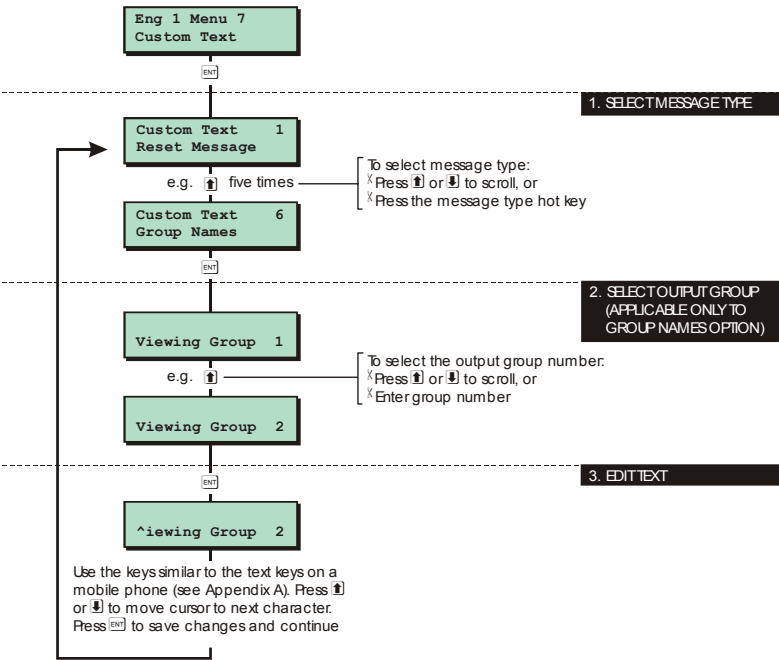
5 – Deferred Set

This is the same as Timed Exit, except that if any zones are activated during the exit procedure, the Exit timer (page 60) is restarted.

6 – Lock Set

Select this option if you are using a lock switch connected to a Lock Set zone type to set the alarm system. This enables the ward's Final Exit zone to be a normal Normal Alm zone while the exit door is locked. See page 25 for further details.

Option 1-7: Customising Text



This option allows you to edit the following text.

Some of the following can be edited from User option 1-7.

1 – Reset Message

This is the message that directs users to call an engineer. You may want to add a contact number.

2 – Location Text

This text can be used to record where the control unit is installed. The text is displayed using the Location option (page 164).

3 – Printer Title

This is shown when you print the log. You can use this to identify the control unit on printed reports.

4 – Remote Reset Msg

This directs the user to contact the Alarm Receiving Centre (ARC). You may want to add a contact number.

5 – Banner Text

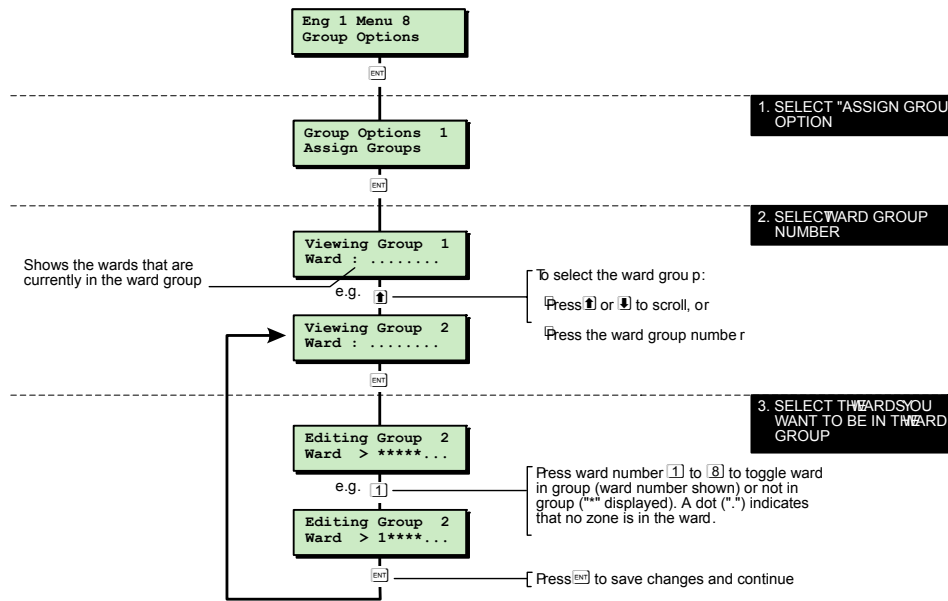
This message is shown on the top line of the display when the keypad is in normal standby mode, waiting for a code to be entered.

6 – Group Names

These are the names of the ward groups (page 80). The names are displayed when setting ward groups (see the *User's Guide*).

Option 1-8: Setting Up Groups

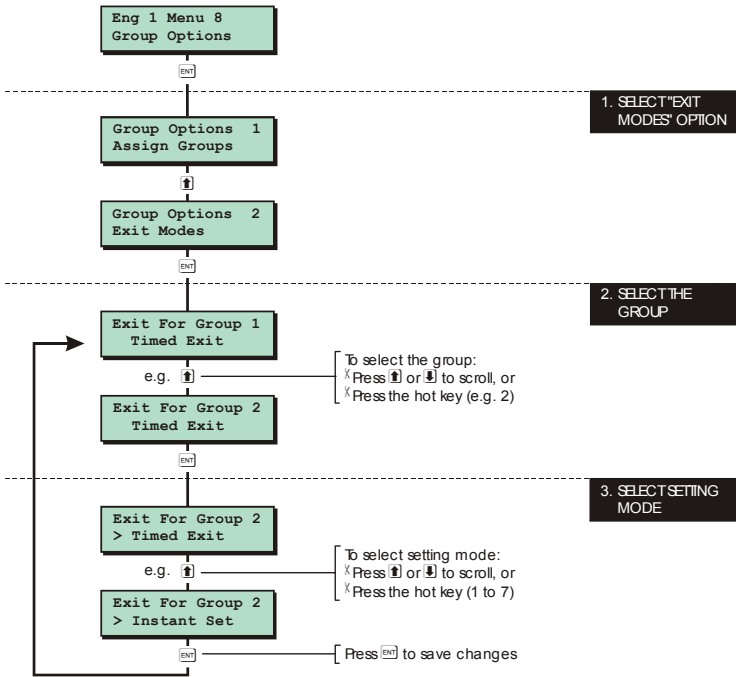
Option 1-8-1: Assigning Wards to Groups



This option enables you to assign wards to groups, which enables a user to set or unset all wards in a ward group with a single operation (as described in the *User's Guide*). Each ward group can contain any combination of wards.

This option is also available from User option 2-8.

Option 1-8-2: Setting the Ward Group Exit Mode



This option is relevant only when a user sets wards through a ward group. The option specifies the exit mode for the wards in the selected ward group. You can specify a different exit mode for each ward group. When a ward group is set, the mode you select here is used instead of the modes selected in option 1-6 (page 76).

In addition to the options documented from page 76, the following option is also available:

7 – Silent Set

Selecting this option will cause the wards in the ward group to set silently.

☞ *Assigning the Access attribute (page 28) to walk-through zones prevents "zone triggered" sounds from occurring during the exit or entry procedure*

Example

Assume the following:

If ward 1 is set as "Timed Exit" in option 1-6, and

ward 2 is set as "Instant Set" in option 1-6, and

ward group 1 (which contains wards 1 and 2) is set to "Exit Terminate" in option 1-8-2,

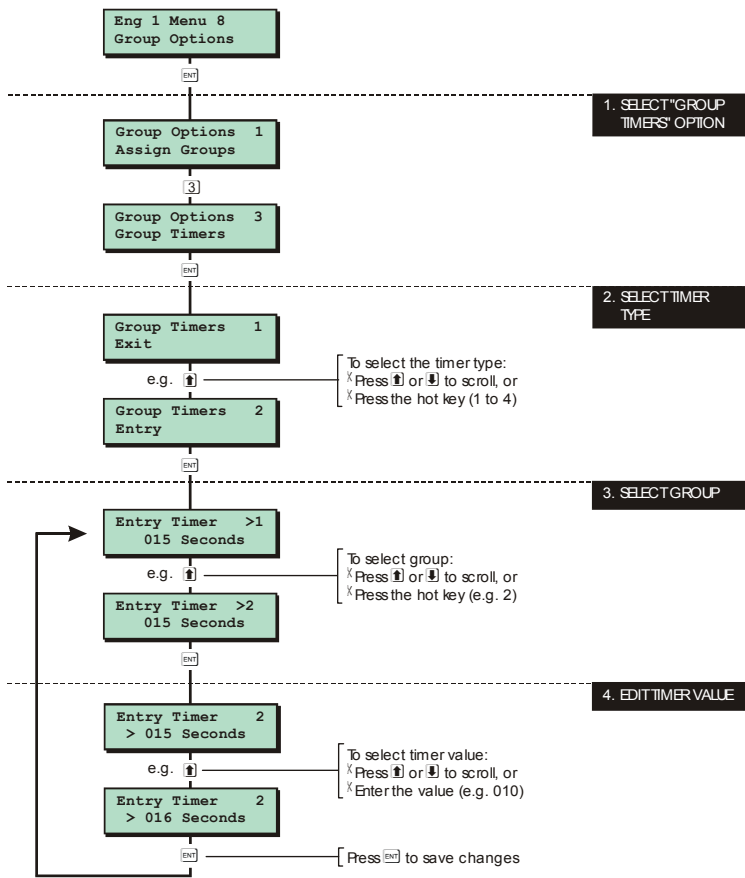
Then:

When setting ward group 1, "Exit Terminate" is used for both wards 1 and 2.

When setting ward 1, "Timed Exit" is used.

When setting ward 2, "Instant Set" is used.

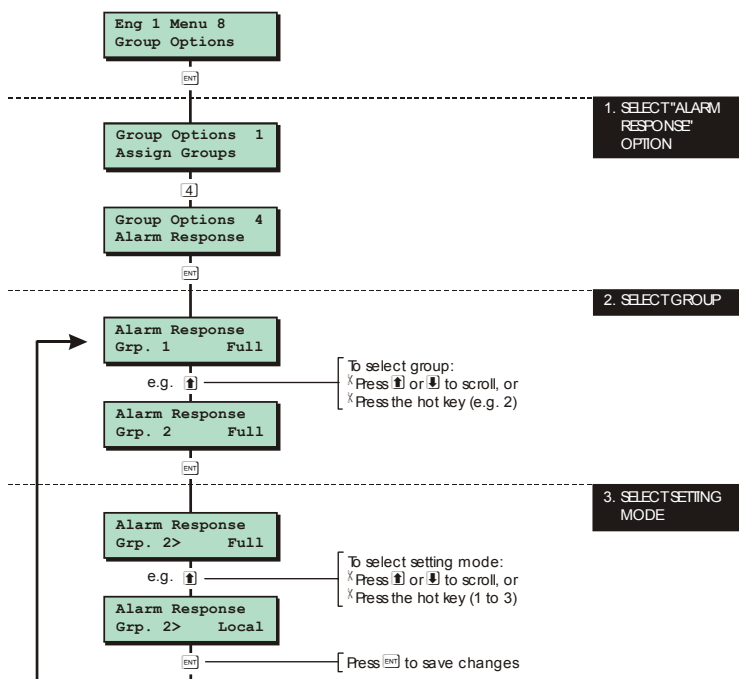
Option 1-8-3: Setting the Ward Group Timers



This option is relevant only when a user sets wards through a ward group. The option specifies the timer values for the wards in the selected ward group. You can specify different timer settings for each ward group.

When a ward group is set, the timer values you specify here are used instead of the values specified in option 1-5-1 (page 60). Page 81 gives an example of how ward group setting modes are used; ward group timers operate in a similar way.

Option **1-8-4**: Setting the Ward Group Alarm Response



This option is relevant only when a user sets a ward group. The option specifies how the system responds to an alarm.

You can specify a different setting for each ward group.

Refer to the notes on page 34 for details of the keypad sounders that operate when an alarm occurs.

1 – Full

Causes an alarm to operate keypad sounders, extension loudspeaker, external sounders, strobe and communications (if used).

2 – Local

Causes an alarm to operate keypad sounders, extension loudspeakers, external sounders and strobe only.

3 – Internal

Causes an alarm to operate keypad sounders and extension loudspeakers only.

05 – On-Line (Keypad) Enabled / On-Line (Keypad) Disabled

On-Line Enabled – When using Downloader software, the On-Line Keypad feature in the Downloader software is enabled.

On-Line Disabled – When using Downloader software, the On-Line Keypad feature is disabled.

06 – Unset Ward First / Set Ward First

Unset Ward First – When the system is part set and a user code is entered, the “0=Unset Wards” option is displayed first.

Set Ward First – When the system is part set and a user code is entered, the “0=Set Selection” option is displayed first.

07 – Digi Normal / Digi Inverted

Digi Normal – The digital communicator outputs on the control panel switch from +12V to 0V when active (+ve removed).

Digi Inverted – The digital communicator outputs on the control panel switch from 0V to +12V when active (+ve applied).

08 – Chime Audible / Chime Visible

Chime Audible – Zones that have a Chime Tone attribute (page 29) will only generate a chime tone.

Chime Visible – Zones that have a Chime Tone attribute will generate a chime tone and the keypads will display the zone that was triggered.

09 – Manual Omits / Automatic Omits

Manual Omits – Zones that have the Omittable attribute (page 28) can be omitted only from User option 1-2 (see the *Manager's Manual*).

Automatic Omits – Zones with the Omittable attribute are automatically omitted if they are active when the system is being set. This option is not relevant if the View Exit Errors option is selected (page 87).

 *Do not use Automatic Omits if any ward is using a Deferred Set or Lock Set (page 77), otherwise the system will not set.*

10 – Omit Tamper No / Omit Tamper Yes

Omit Tamper No – Omitting a zone using User option 1-2 (see the *Manager's Manual*) will not also omit tamper faults from that zone.

Omit Tamper Yes – Omitting a zone using User option 1-2 also omits tamper faults from that zone.

11 – Global Setting / Local Setting

Global Setting – Allows users to set a ward from any keypad, providing their user type allows this and the ward has been allocated to the user (as specified in User option 2-4; see the *Manager's Manual*). Also allows any telecommand to set a ward, providing the ward has been allocated to the telecommand (see option [2]-[9]).

Local Setting – Allows a user to set a ward only if the ward has been allocated to the user and the keypad belongs to that ward (page 34). Also allows a telecommand to set a ward only if the ward has been allocated to the telecommand's buttons, and the MRNode has been allocated to the ward (see Option **1-3-1** to allocate a ward to an MRNode).

12 – Global Unsetting / Local Unsetting

Global Unsetting – Allows users to unset a ward from any keypad, providing the ward has been allocated to the user (as specified in User option 2-4; see the *Manager's Manual*). Also allows any telecommand to unset a ward, providing the ward has been allocated to the telecommand button (see option **2-9**).

Local Unsetting – Allows a user to unset a ward only if the ward has been allocated to the user and the keypad belongs to that ward (page 34). Also allows a telecommand to unset a ward only if the ward has been allocated to the telecommand's buttons, and the MRNode has been allocated to the ward (see Option **1-3-1** to allocate a ward to an MRNode.) .

13 – 24hr Omit Global / 24hr Omit Local

24hr Omit Global – Allows a zone to be omitted or shunted from any keypad.

24hr Omit Local – Allows a zone to be omitted or shunted from a keypad only if the zone is in the same ward as the keypad.

14 – Ward Bell Time / Global Bell Time

Ward Bell Time – Causes the panel to use the Bell Delay (page 61) or Bell Duration (page 61) ward timers when the system is full or part set (i.e. not all wards set).

Global Bell Time – Causes the panel to use the Bell Delay (page 61) or Bell Duration (page 61) ward timers when the system is part set. When the system is full set, the panel uses the Sys Bell Dly (page 62) and Sys Bell Dur (page 62) timers.

15 – Latching Fire / Nonlatching Fire

Latching Fire – Fire zones (page 23) will cause an alarm when triggered and will be re-armed only after entering a user code twice (once to silence the alarm, and once to reset the alarm).

Nonlatching Fire – Fire zones will cause an alarm when triggered. On entering a user code, the alarm is silenced. The zone is re-armed immediately after a user code is entered to silence the alarm.

16 – Timed code o/p / Latched code o/p

This setting is used for outputs that follow a user code (page 43). It is typically used to unlock and re-lock a door when a user code is entered.

Timed code o/p – If the output is latched (see step 6 of the flow chart on page 39), the output activates for approximately 2 seconds when a user code is entered, then deactivates. If the output is pulsed, the output activates for the duration of the programmed pulse time, then deactivates.

Latched code o/p – If the output is latched, the output activates when a user code is entered, then deactivates when the user code is entered again. If the output is pulsed, the output activates for the duration of the programmed pulse time, then deactivates.

17 – Latching 24hr / Nonlatching 24hr

Latching 24hr – 24 Hour zones (page 22) will cause an alarm when triggered and will be re-armed only after entering a user code twice (once to silence the alarm, and once to reset the alarm).

Nonlatching 24hr – 24 Hour zones will cause an alarm when triggered. On entering a user code, the alarm is silenced. The zone is re-armed immediately after a user code is entered to silence the alarm.

18 – Access code only / Access all codes

Access code only – Causes outputs that follow the Access Code or Access event (page 45 or 56) to activate only when a user code of type Access is entered.

Access all codes – Causes the outputs to activate when any user code is entered.

19 – NVM is Unlocked / NVM is Locked

NVM is Unlocked – The panel can be reset to its factory defaults by shorting the FACTORY RESTART pins on the control panel PCB during power-up.

NVM is Locked – The panel cannot be reset to its factory default settings by shorting the FACTORY RESTART pins. Keypads give a warning sound if the terminals are shorted.

☞ *If you select this option, it is imperative that you remember the engineer code.*

20 – Unshunt, no exit / Unshunt & exit

Unshunt, no exit – Entering a Shunt user code (User option 8-1; see the *Manager's Manual*) to reinstate zones does not start the exit procedure.

Unshunt & exit – Entering a Shunt user code to reinstate zones starts the exit procedure for all the appropriate wards within the shunt group that are already set.

21 – Ignore errors / View exit errors

Ignore errors – When setting the system with one or more zones active (i.e. triggered), the panel continues with the exit procedure, but displays the zones that are currently active. If the zones are not cleared at the end of the exit procedure, the internal sounder sounds, the external strobe flashes and the display shows an error.

View exit errors – When setting the system with one or more zones active, the panel displays the zones that are currently active and does not allow the system to be set while zones are active. After clearing the active zones, the panel prompts for confirmation to continue with the exit procedure.

22 – Mimic, All times / Mimic, Set only

Mimic, All times – When using an output of type Mimic (page 58), the output mimics the zone at all times.

Mimic, Set only – When using an output of type Mimic, the output mimics the zone only if the zone is in a ward that is set. The output mimics the zone, even if the zone is omitted or shunted (e.g. using User option 1-2 or 1-3; see the *Manager's Manual*).

23 – Lo Security Eng. / Hi Security Eng.

Lo Security Eng. – You are able to access the Engineer menu options by entering the engineer code.

Hi Security Eng. – When you enter the engineer code, a code is displayed. You need to contact the Alarm Receiving Centre (ARC) and tell them the code to obtain a remote reset code. Entering the remote reset code then gives access to the Engineer menu options.

24 – Duress Allow NO / Duress Allow YES

Duress Allow NO – Prevents Duress and Panic user codes from being set up in User option 2-4.

Duress Allow YES – Enables Duress and Panic user codes to be set up in User option 2-4 (please refer to the *Manager's Manual*).

25 – Keypad PA OFF. / ON

Keypad PA OFF – Switches off the keypad PA feature, as described next.

Keypad PA ON – Causes an audible panic alarm to be generated when keys 1 and 3 keys are simultaneously pressed at the keypad.

26 – P.Set Hotkey YES/ P.Set Hotkey NO

P.Set Hotkey YES – Enables ward group hot keys to be used to part set/unset the system (see the *Manager's Manual*).

P.Set Hotkey NO – Prevents ward group hot keys from being used.

*Note: **Select P.Set Hotkey NO** to allow users to perform silent set using key **[8]**.*

27 – Exit Foyer / Inst Set Foyer

Exit Foyer – Causes ward 1 always to use the ward 1 Exit time (page 60) whenever the ward is set automatically by the Foyer Mode option (page 37).

Inst Set Foyer – Allows ward 1 to ignore the Exit Delay and set instantly when all wards specified by the Foyer Mode option have been set. This can occur only if the keypad or keyswitch (page 24) used to set the last ward is not in ward 1.

28 – Unset Entry Wards/Unset All Wards

This option applies to telecommand unset buttons (button 4) that are allocated to more than one ward. Note that this option works in conjunction with option **[1]-[3]-[2]-[1] 5]** Entry Unset. A ward must be listed in Option **[1]-[3]-[2]-[1] 5]** before Option **[1]-[9]-[1]-[2] 8]** has any effect.

Unset Entry Wards – A telecommand will unset the ward that has an entry timer running (or is in alarm), but leave unchanged any other ward that is set (and allocated to the telecommand unset button).

Unset All Wards – A telecommand will unset all wards allocated to the unset button when any one of the wards has an entry timer running (or is in alarm).

29 – Radio PA Audible/Silent

Silent – The control unit triggers a silent PA alarm if a telecommand or radio PA starts a panic alarm. In addition, the keypad does not display any alerts, but triggers the appropriate outputs.

Audible – The control unit generates PA tones from the sounder and operates the strobe when a telecommand or radio PA starts a panic alarm, displays alerts on the keypads, and triggers the appropriate outputs.

30 – Silent Alerts

Use this command to disable the Alert fault tones. When enabled (default) the system gives an alert tone and displays alerts on the keypad.

Y (Silent). The display shows alert messages for faults, but does not sound alert tones.

N (Audible). The display shows alert messages, and the system gives alert tones.

31 – Bus Cut Confirmed/Unconfirmed Alarm

If an intruder cuts one or more of the bus cables then the control unit can report the event as either a confirmed or an unconfirmed alarm. Use this command to select one of these two options.

☞ *To ensure that this feature works correctly program Tamperers as Tamperers/Alarms to "Tamperers as Alarms". See page 91.*

Confirmed. The control unit reports a cut bus cable as a confirmed alarm.

Unconfirmed. The control unit reports a cut bus cable as an unconfirmed alarm.

Option 1-9-2: Choosing DD243 Configuration Options

(For defaults see page 133.)

1 – Confirmation On / Confirmation Off

Confirmation On – Select this option if you want to use the DD243 rules. Selecting the option enables the panel to generate "confirmed" alarms.

A confirmed alarm occurs in a ward when at least two separate zones trigger within the Confirmation time (page 62), providing the ward is set and the Entry Delay timer (page 61) is not running. A confirmed alarm indicates that the alarm condition has a low probability of being a false alarm. Generally, police will respond only to confirmed alarms. Note that the second detector may be in a separate ward from the first detector. The control panel reports the confirmed alarm for the ward containing the second detector.

If you do not select Confirmation On, all alarms are unconfirmed and require only one zone to trigger in the alarm state (e.g. a Normal Alm zone while the system is set).

☞ *Please refer to the descriptions below for further information about the effects of Confirmation On.*

Confirmation Off – Selecting this option prevents confirmed alarms from being generated and disables any output configured to follow a confirmed alarm.

2 – Sndrs on Unconf / Sndrs on Confirm

These options are relevant only if you have selected Confirmation On.

Sndrs on Unconf – The control unit starts the internal sounders (including keypad sounders) immediately after an unconfirmed alarm. This behaviour is also used if you have selected Confirmation Off.

Sndrs on Confirm – The control unit activates the internal sounders after a confirmed alarm and any programmed bell delay.

☞ *The sounders operate without a confirmed alarm if the Entry Delay timer (page 61) has been started and has expired.*

3 – Bells on Unconf / Bells on Confirm

These options are relevant only if you have selected Confirmation On.

Bells on Unconf (default) – The control unit activates the external bell output immediately after an unconfirmed alarm. This behaviour is also used if you have selected **Confirmation Off**.

Bells on Confirm – The control unit activates the external bell output after a confirmed alarm and any programmed bell delay.

☞ *The external bell output operates without a confirmed alarm if the Entry Delay timer (page 61) has been started and has expired.*

☞ *Bells and strobes can be disabled for selected wards using the Bell & Strobe attribute (page 37).*

☞ *Refer to the Bell Delay and Bell Duration notes on page 61.*

4 – After Entry Yes / After Entry No

These options are relevant only if you have selected Confirmation On.

After Entry No (default) – Choose this option if you want to prevent confirmed alarms from occurring at all after the Entry Delay timer has expired. *Use this option to comply with DD243:2002 paras 6.4.2, 6.4.3, 6.4.4 and 6.4.6.*

After Entry Yes – Select this option if you want it to be possible for a confirmed alarm to be generated once the Entry Delay timer (page 61) has expired. With this option selected, if an intruder has started the Entry Delay timer (e.g. by breaking through the front door), a confirmed alarm occurs only if either one or two further zones are triggered after the Entry Delay timer expires. Only zone(s) that are not on the entry route are considered (i.e. zones that have the Entry zone attribute are ignored).

Select the Confirm 2 Zones or Confirm 1 Zone option to choose whether one or two zone activations are required after the Entry Delay timer (page 61) has expired.

5 – Ent KPD Lock Off / Ent KPD Lock On

These options are relevant only if you have selected Confirmation On.

Ent KPD Lock Off (default) – Users can unset the system from a keypad during the Entry Delay time (page 61).

Ent KPD Lock On – Users cannot unset the system from a keypad during the Entry Delay time (page 61). *Select this option if you are installing a system to comply with DD243:2002 paras 6.4.5 and 6.4.6. The user must unset the system with a proximity tag ("Portable ACE") or the Alarm Receiving Centre (ARC) unsets the system.*

6 – Confirm 2 Zones / Confirm 1 Zone

These options are relevant only if you have selected Confirmation On and After Entry Yes.

Confirm 2 Zones (default) – A confirmed alarm is generated if the intruder activates two additional zones after the Entry Delay timer (page 61) expires. If the control unit is in alarm before the user starts the Entry Delay timer, only one subsequent zone violation is required. *Select this option if you are installing a DD243:2002 para 6.4.5 compliant system and the user must unset the system with a proximity detector ("Portable ACE").*

Confirm 1 Zone – A confirmed alarm is generated if the intruder activates one additional zone after the Entry Delay timer (page 61) expires. This option does not comply with DD243:2002.

Option **1-9-3**: Choosing EN50131 Configuration Options

(For defaults see page 133.)

01 – 4 Digit Codes / 6 Digit Codes

4 Digit Codes – All system user (access) codes are four digits.

6 Digit Codes – All user (access) codes are six digits. When using six-digit user codes, the default engineer code is 123400 and the default manager code is 567800.

 *You cannot change this setting if the engineer or default manager (user 01) code has been changed, or any other user code has been set up in User option 2-4. Users can be deleted using option 2-7-3-7 (page 131) and 2-7-3-8 (page 132).*

02 – Internal Sounder / Local Sounder

Internal Sounder– If an alarm occurs while the Entry Delay timer (page 61) is running, both the extension speaker and keypad sounders operate for 30 seconds. Once the 30-second period has expired, a full alarm occurs (page 22), unless overridden by option 1-8-4 (page 83).

Local Sounder – Operation is the same as above, but external sounders and the strobe also operate for the first 30 seconds.

03 – Instant Alarm / Delayed Alarm

Instant Alarm– Causes system and ward Alarm outputs (page 44 and 54) to activate immediately a full alarm is generated by the Entry Delay timer (page 61) expiring.

Delayed Alarm – Causes system and ward Alarm outputs to be delayed by a further 30 seconds.

04 – Tamper As Alarm / Tamper As Tamps

Tamper As Alarm – If there is a tamper condition when the system is set, the control unit will:

Communicate an alarm (CID code 130, SIA code BA) message to the Alarm Receiving Centre (ARC). This depends on the communicator format you select if you choose to employ the on-board modem.

Trigger system, ward and zone outputs of type "Alarm" and "Tamper Alarm" (or "Tamper").

Note: If an intruder cuts a network cable to an expander then this will trigger a confirmed alarm (since, effectively, more than one zone has been tampered). See option 1-9-1-31 on page 89.

If there is a zone tamper condition when the system is unset, the control unit will:

Transmit only tamper (CID code 137/SIA code TA) messages to the ARC.

Trigger system, ward and zone outputs of type "Tamper Alarm" (or "Tamper"). Please see the following table.

Tampers As Tampers – If there is a tamper condition when the system is set or unset, the control unit will:

Transmit only tamper (CID code 137/SIA code TA) messages to the ARC.

Trigger system, ward and zone outputs of type "Tamper Alarm" (or "Tamper")

Table 3. Effect of Tampers as Alarms on Output Operation

Tamper Triggered (Example)	Control unit Status	"Tampers As"	OUTPUT TYPE					
			System		Ward		Zone	
			Alarm	Tamper	Alarm	Tamper	Alarm	Tamper
Control unit	Unset	Alarms	Off	On	Off	On	Off	Off
Keypad	Unset	Alarms	Off	On	Off	On	Off	Off
Zone	Unset	Alarms	Off	On	Off	On	On	On
Control unit	Set	Alarms	On	On	On	On	Off	Off
Keypad	Set	Alarms	On	On	On	On	Off	Off
Zone	Set	Alarms	On	On	On	On	On	On
Control unit	Unset	Tampers	Off	On	Off	On	Off	Off
Keypad	Unset	Tampers	Off	On	Off	On	Off	Off
Zone	Unset	Tampers	Off	On	Off	On	Off	On
Control unit	Set	Tampers	Off	On	Off	On	Off	Off
Keypad	Set	Tampers	Off	On	Off	On	Off	Off
Zone	Set	Tampers	Off	On	Off	On	Off	On

05 – Gen/fault: User / Eng

User – With this option selected, a user can override a general fault (page 48) when setting the alarm system.

Eng – Prevents the alarm system from being set if there is a general fault (page 48).

06 – Telecommand Override

N – A user with a telecommand cannot set the system if there is a fault that would require the user to acknowledge an alert at the keypad.

Y – A user can set the system with a telecommand.

Note that setting this option to "Y" is not sufficient to allow a user to set the system while faults are present:

Option 05 Gen/fault must be set to "User" (default) to allow a telecommand to override general faults.

Option 08 Mask Override must be set to "override" (default) to allow a telecommand to override masking faults.

Option 12 AC Bypass must be set to "Always" (default) to allow a telecommand to override Control unit Mains Fail, Remote PSU Mains Fail, PSU Power Zone Type alerts.

Option 14 LF Bypass must be set to "Always" (default) or "User" to allow a telecommand to override PSTN faults.

Option 19 Battery Fault Override must be set to "Always" to allow a telecommand to override battery faults.

07 – 4k4 = Masking

Masking – The control unit treats a resistance of 4k4 on a wired detector as a Masking signal.

Fault – The control unit treats a resistance of 4k4 on a wired detector as Fault Signal.

Note: Compliance with PD6662/prEN51031-1:2006 Grade 3 requires that detectors report fault conditions.

08 – Mask Override / Mask Inhibit

Mask Override – Users can set a ward that has a mask fault (page 26).

Mask Inhibit – Users cannot set any ward if there is a mask fault anywhere on the system (page 26).

09 – Mask Unset Fault / Mask Unset Tamp / Mask Unset Alarm

Mask Unset Fault – The system will consider a masking condition (page 26) when the zone is unset as a fault condition. Outputs programmed as Mask Fault (system output; page 49) or Mask Flt (ward output; page 57) will activate.

Mask Unset Tamp – The system will consider a masking condition when the zone is unset as a tamper condition. Outputs programmed as Mask Tamper (system output; page 49) or Mask Tamp (ward output; page 57) will activate.

Mask Unset Alarm – The system will consider a masking condition when the zone is unset as an alarm condition. Outputs programmed as Mask Alarm will also activate.

10 – Mask Set Fault / Mask Set Tamper / Mask Set Alarm

Mask Set Fault – The system will consider a masking condition (page 26) when the zone is set as a fault condition. Outputs programmed as Mask Fault (system output; page 49) or Mask Flt (ward output; page 57) will activate.

Mask Set Tamper – The system will consider a masking condition when the zone is set as a tamper condition. Outputs programmed as Mask Tamper (system output; page 49) or Mask Tamp (ward output; page 57) will activate.

Mask Set Alarm – The system considers a masking condition when the zone is set as an alarm. Outputs programmed as Mask Alarm will also activate.

11 – AC Fail:No Reset / User / Engineer

No Reset – An AC Mains Fault alert will exist while the mains supply is switched off, but will automatically disappear when the mains is restored. The control unit monitors its own power supply, any remote PSU connected to a network, and any PSU reporting back to the control unit by means of a zone with type PSU Power. No resetting of the alert is required.

 *The AC Off Delay timer (page 63) determines how long the mains must be off before the system generates an alert.*

User – An alert generated by a mains failure will require a normal user reset.

Engineer – An alert generated by a mains failure will require an engineer or remote reset.

12 – AC Bypass:Always / Healthy / Eng / Never

Always – With this option selected, an AC Mains Fault alert will not prevent a user from being able to set the alarm system.

Healthy – Allows a user to override an AC fail alert and set the system, but only if mains is present.

Never – Prevents the alarm system from being set if there is an AC fail alert that needs to be reset. If the AC Fail option is set to Engineer, the system will be able to be set only after the alert is reset by an engineer or remote reset.

13 – Line Fail:No Rst / User / Eng

No Rst – A line fault (e.g. no dial tone present) detected by the on-board modem or by an external communicator will cause an alert to be generated, but the alert will disappear when the line is restored. No resetting of the alert will be required.

The on-board modem can generate a "PSTN Line Fault" only if communications from the on-board modem to an Alarm Receiving Centre (ARC) has been enabled (see page 110).

An external communicator must connect to the LINE FLT input of the panel to signal a line fault. The line fault alert is "ATE L.F. Single" or "ATE L.F. All" (see page 49).

User – An alert generated by a line fault will require a normal user reset.

Engineer – An alert generated by a line fault will require an engineer or remote reset.

14 – LF Bypass:Always / User / Eng

Always – With this option selected, an PSTN Line Fault alert will not prevent a user from being able to set the alarm system.

User – Allows a user to override an PSTN Line Fault alert and set the system, but only if there is no line fault.

Eng – Prevents the alarm system from being set if there is a PSTN Line Fault alert that needs to be reset. If the Line Fail option is set to Eng, the system will be able to be set only after the alert is reset by an engineer or remote reset.

15 – Supervision Fail Alert

Alert – The control unit displays a supervision failure alert.

Alarm – The control unit starts an intruder alarm

Tamper – The control unit starts a tamper alarm

The control unit also operates any outputs programmed as Supervision Failure.

16 – Reset Supervision Engineer/User

Reset when healthy – The control unit clears a supervision failure if none of the radio zones allocated to the ward have a supervision failure.

User Reset – A user can reset a supervision failure by entering their access code at a keypad.

Engineer or Remote Reset – The engineer must reset a supervision failure by entering their access code at a keypad, or remotely.

17 – Reset Jamming Engineer/User

Always – The control unit clears a jamming alert if the MRNode detects that the jamming has stopped.

User Reset – A user can reset a jamming alert by entering their access code at a keypad.

Engineer or Remote Reset – The engineer must reset a jamming alert by entering their access code at a keypad, or remotely.

18 – Battery Fault Alert Reset

Auto – The control unit clears the alert when it detects that the panel battery is healthy.

User – The control unit clears the alert when an end user enters their code, provided the panel's battery is healthy.

Engineer – The control unit clears the alert when either the engineer enters their code at the keypad, or performs a remote reset, provided the panel's battery is healthy.

19 – Battery Low Alert Override When Setting

This option decides whether the user can carry on setting the system when there is an alert caused by a battery fault at the control unit or a remote power supply.

Never – The control unit will not allow users to set the system from a keypad.

Healthy – If there has been an alert, but the batteries are all healthy at the time the user tries to set the system from the keypad then the control unit asks the user if they wish to proceed. The user can abort setting or carry on. If the user carries on with setting then the control unit logs a "set with battery fault" event.

If the batteries are not healthy when the user tries to set the system, then the control unit will not allow the system to set.

Always – If the user tries to set the system from the keypad, then the control unit will ask the user if they wish to proceed. The user can continue setting or abort. If the user continues setting then the control unit logs a "set with battery fault" event.

20 – Status Display

This option decides whether or not the keypads shows the system set status.

Never – The keypads show the set/unset status only after a user has entered their access code. The control unit removes the status information as soon as the control unit finishes setting a ward.

Timed – The keypads display the set/unset status of the system for a programmed number of seconds after the control unit has finished setting a ward. To program the length of time that setting status is visible use Option **1** - **5** - **2**: - **30** (see page 66).

Always – The keypad always shows the set/unset status of the system.

21 - Mask As General Fault

Use this option to select whether the control unit treats a masking event while the system is unset as a general fault or not.

No – Masking while unset does not generate a general fault.

Yes – Masking while unset does generate a general fault.

Option 1-0: Going to User Menu 1

This option allows you to access User menu 1. For details of the options in this menu, please refer to the *Manager's Manual*.

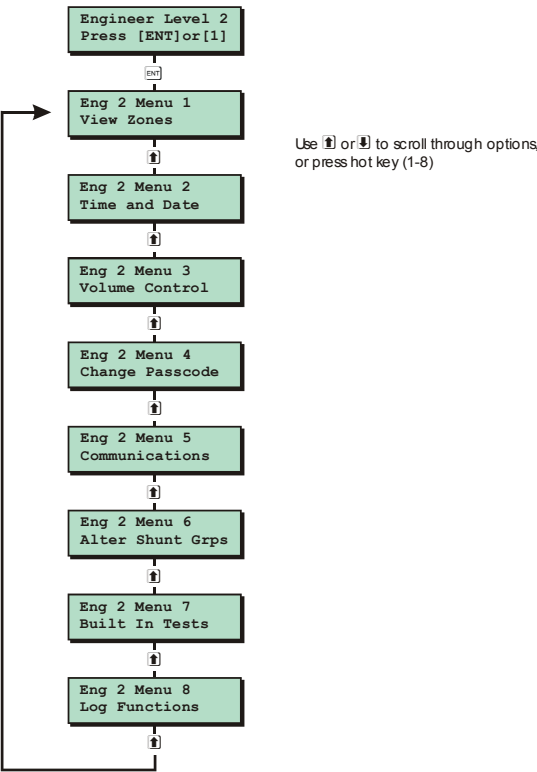
☞ *You can use user option 1-4 to change the engineer code.*

☞ *Some options are not available to an engineer.*

Chapter 4: Using Engineer Menu 2

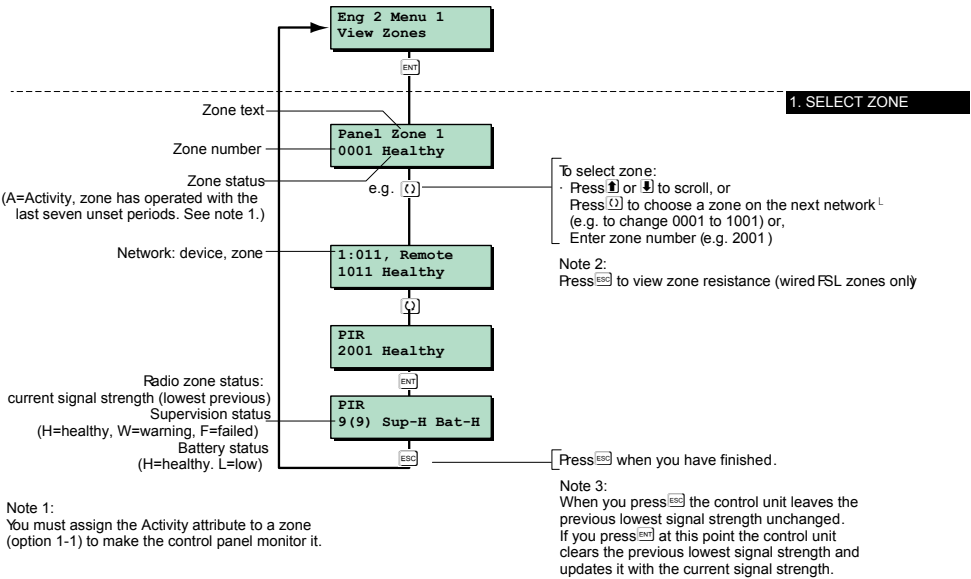
Introduction

Engineer menu 2 contains the options shown in the following flowchart.



Engineer Menu 2

Option 2-1: Viewing Zone Status



This option enables you to determine the status of each zone. The zone status conditions and resistance are shown in the following table for an FSL zone without masking (page 26):

Table 4. Zone Status Conditions and Resistance for FSL Zones

Condition	FSL Resistor Configuration Selected (page 32)			
	4K7/2K2	1K0/1K0	4K7/4K7	2K2/2K2
Healthy	2.2 KΩ ± 20%	1.0 KΩ ± 20%	4.7 KΩ ± 20%	2.2 KΩ ± 20%
Active	6.9 KΩ ± 20%	2.0 KΩ ± 20%	9.4 KΩ ± 20%	4.4 KΩ ± 20%
Tamper	>6.9 KΩ +20%	>2.0 KΩ +20%	>9.4 KΩ +20%	>4.4 KΩ +20%
Shorted	<2.2 KΩ - 20%	<1.0 KΩ - 20%	<4.7 KΩ - 20%	<2.2 KΩ - 20%

For an FSL zone with masking:

- Healthy = 2.2 KΩ ± 20%
- Active = 6.9 KΩ ± 20%
- Masked = 4.4 KΩ ± 20%, or 9.1 KΩ ±20%
- Tamper = <2.2 KΩ - 20%, or >9.1 KΩ +20%

For double-pole zone:

- Healthy = Contacts close circuited and tamper contacts closed circuited
- Active = Contacts open circuited and tamper contacts closed circuited

Tamper = Tamper contact open circuited

For a radio zone:

Healthy = The detector has not signalled an alarm, but is in working order.

Active = The detector has signalled an alarm.

Tampered = The detector has signalled a tamper alarm.

Current signal strength 1 to 9, where 1 is the lowest, Previous lowest signal strength in brackets.

Supervision status:

Sup-H = supervision healthy

Sup-W = Supervision warning

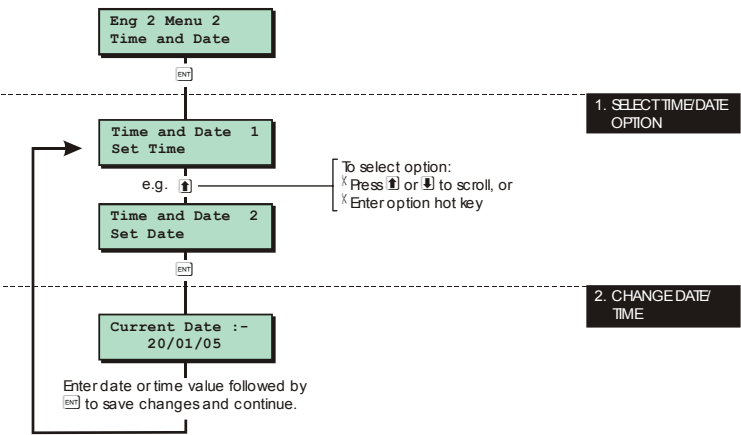
Sup-F = Supervision failed

Battery status:

Batt-H = Battery healthy

Batt-L = Battery low.

Option 2-2: Specifying the Time and Date



Use this option to make sure that the system date and time are correct.

The system automatically advances/retards the time by one hour at 1am GMT on the standard summer/winter changeover dates.

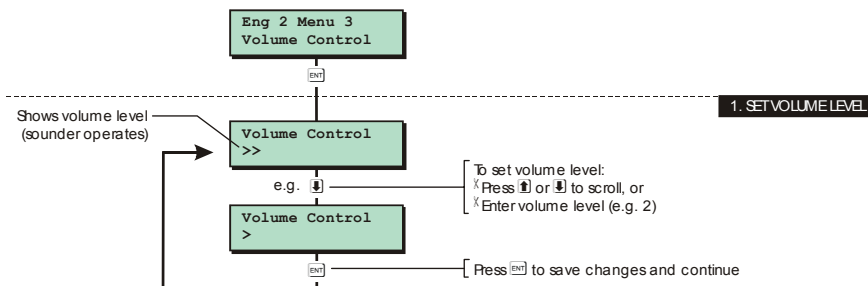
1 – Set Time

The time is displayed in a 24-hour format on all keypads and is also used to time stamp events in the system log (User option 2-9; see the *Manager's Manual*).

2 – Set System Date

The system date is displayed on keypads. it is also used to provide date stamps for events in the system log.

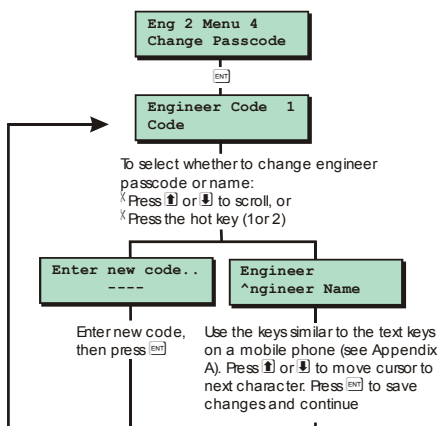
Option [2]-[3]: Setting the Loudspeaker Volume Level



This option allows you to adjust the volume level of the extension loudspeaker connected to the control panel, or to disable it completely.

It does not affect the keypad volume, but the keypad will sound when changing the volume.

Option [2]-[4]: Changing Your Passcode and Name



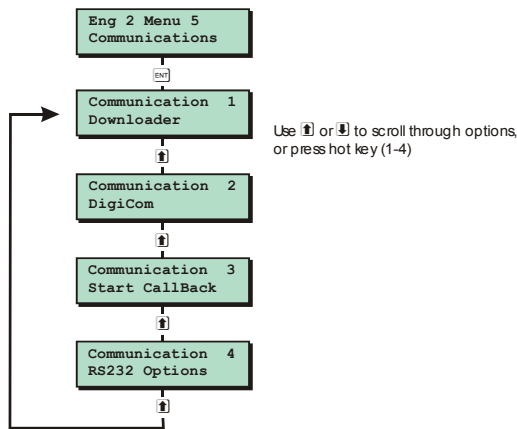
This option allows you to change your engineer code and name.

The engineer name is displayed against appropriate entries in the system log (page 138).

The code is either four or six digits, depending on whether the 4 Digit Codes or 6 Digit Codes configuration option is selected (page 91). The default code is 1234 if four-digit codes are used, and 123400 if six-digit codes are used.

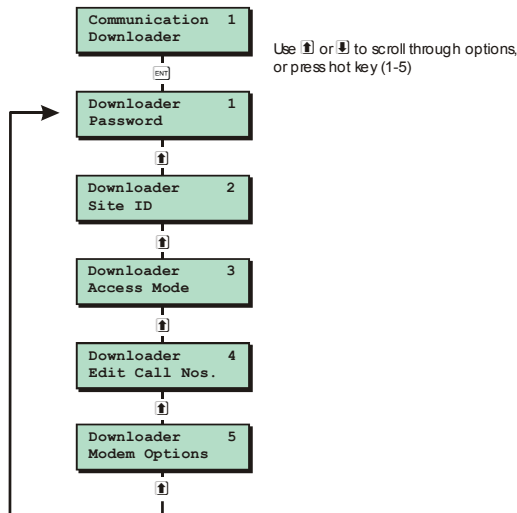
To set the engineer code to the default, open the panel lid, silence the tamper alarm by entering a user code, then with power still applied to the PCB, momentarily short the "Factory Restart" pins on the PCB.

Option [2]-[5]: Setting Up Communications



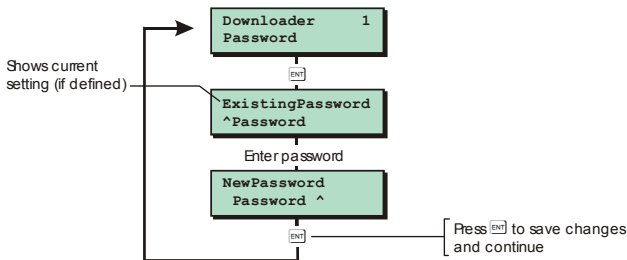
The options in the Communication menu are described next.

Option [2]-[5]-[1]: Setting Up the Downloader Options



The options in the Downloader menu relate to communications via the on-board modem or USB port with a remote PC that is running the Downloader software. The options in the Downloader menu are described next. (For defaults see page 133.)

Option [2]-[5]-[1]-[1] - Defining the Downloader Password



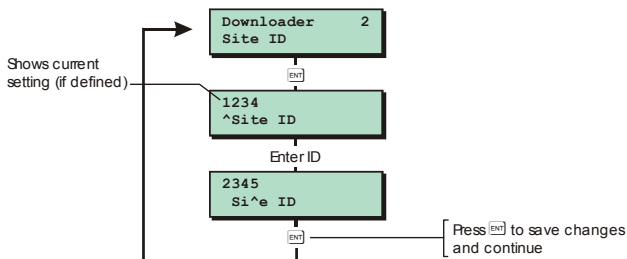
The first connection from Downloader is accepted without first having to set up the password or Site ID at the panel. During this first connection, the Site ID and password are set up automatically by Downloader. There is therefore not normally a need to use this option.

This option allows you to specify the password used by Downloader to connect to the panel. The password is used if Downloader connects through the on-board modem (if fitted) or USB port. The password can be up to 16 characters long and provides a means of security to prevent unauthorised communications with the panel from a computer running the Downloader software.

The password specified in the site profile at the Downloader software must match the password that is stored in the control panel.

Refer to page 151 for details of the keys to use to enter or change the password.

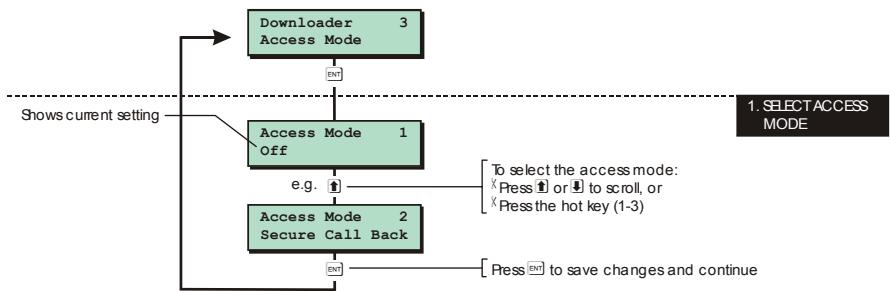
Option [2]-[5]-[1]-[2] - Defining the Site Identification



This option allows you to specify a site identification for the panel (use no more than 12 characters). When calling in via the on-board modem (if fitted) or USB port, the Downloader software must supply the same site ID as defined at the control panel before the connection is accepted. The site ID also enables the Downloader software to obtain the correct site profile when the control panel rings the remote PC.

Refer to page 151 for details of the keys to use to enter the site ID. See also the note in the previous section (Downloader Password).

Option 2-5-1-3 - Defining the Access Mode



This option determines how the control panel responds to incoming calls from the Downloader software via the on-board modem. Once the Downloader software is connected, it is able to upload data and change settings.

Providing option 2 or 3 is selected, Downloader can connect, even if an engineer or user is using the system.

Choose one of the following options:

1 – Off

Select this option to prevent the panel from answering incoming calls. A manual call can be made using option 2-5-3 (page 119) or User option 2-6-1.

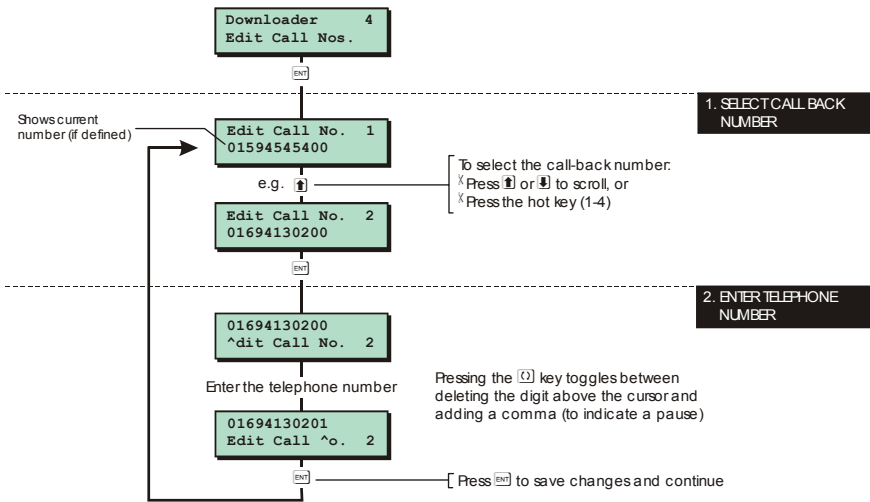
2 – Secure Call Back

With this option selected, when the Downloader software has called the panel and supplied the correct password, the panel immediately hangs up the telephone line and calls back the Downloader software. This is a more secure method of establishing a link than the Unattended option, since the Downloader software supplies the call-back ID, which the panel uses to determine the telephone number to call back.

3 – Unattended

Select this option if you want the Downloader software to be allowed full access to the control panel immediately after supplying the correct password.

Option **2-5-1-4**: - Editing Call-Back Numbers

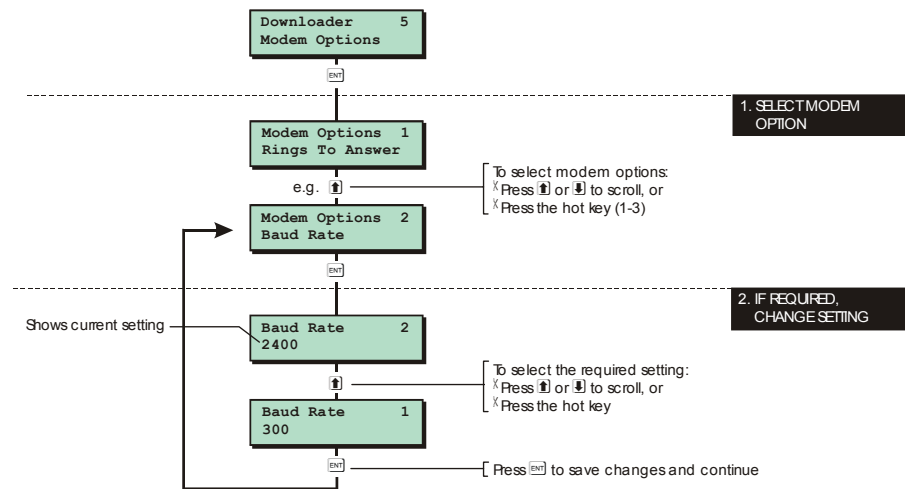


This option allows you to define or edit up to eight telephone numbers for communication with a PC running the Downloader software via the on-board modem.

Using the **⏏** key, you can insert a 4-second pause between any two digits of the telephone number (the pause is indicated by a comma). This may be necessary if the telephone system or exchange mis-dials using the normal dialling speed of the control panel. If a delay is necessary, it is normally placed either before the first digit (to give time to connect to the line), or after the first digit that is used to obtain an outside line.

ARC telephone numbers can be defined by option 2-5-2-2 (page 116)

Option [2]-[5]-[1]-[5] - Choosing the Modem Options



The following options are available:

1 – Rings to Answer

Specifies the number of rings before the panel answers an incoming call via the on-board modem.

Note: If you plan to connect the control unit to a private branch exchange (PBX) then make sure that Rings to Answer is set to at least “5”. This setting ensures that the control unit can detect incoming calls from the PBX correctly.

2 – Baud Rate

This is the baud rate used for communications over the telephone line to the Downloader software. A setting of 1200 baud is normally used.

3 – Ans Phone Defeat

This option is useful if the telephone line is shared with an automatic telephone answering machine (to record voice messages). If you select Enabled, the panel listens for a single ring. If there is another call within 30 seconds, the panel assumes that the call is from Downloader and answers the call immediately, thereby preventing the answering machine from answering the call. The Rings to Answer option is not relevant when Answer Phone Defeat is enabled.

Option [2]-[5]-[1]-[6] Remote Service

The following options are available (for defaults see page 133.):

1 – Enable?

This option allows you enable or disable remote service calls. Press **1** or **2** to select either of the following:

No – The control unit does not make any service calls.

Yes – The control unit makes services calls as programmed by the options described below.

2 – Call Number

Use this option to select one of the 8 telephone numbers programmed using Option 2-5-1-4. This will be the telephone number that the control unit calls when starting a service call.

3 – Time Period

On the day that a service call is due, there may be times when it is inconvenient for the control unit to call, or for the service centre to receive calls. Use this option to define a time window. If the control unit needs to make repeated attempts to complete a service call, then these attempts all take place with this time window. The start and end times of the window must be on the same day.

When you select this option the screen immediately displays the Start Time. Key in the start time in hours and minutes. Use the 24 hour clock. Press **[ENT]** to finish.

The screen then displays the End Time. Key in the end time in hours and minutes. The end time must be later than the start time. Use the 24 hour clock. Press **[ENT]** to finish.

4 – Next Service

Use this option to specify the day and time of the next service call. To prevent all control units making service calls at the same time, make sure each control unit has a different date and/or time.

When you select this option the screen immediately displays the Service time. Key in the preferred time of day for the service call. Use the 24 hour clock. Press **[ENT]** to finish.

The screen then displays the Service Date. Key in the preferred date for the service call. Press **[ENT]** to finish.

Note: The control unit may change this date if it has to make several attempts to connect to Downloader.

5 – Interval

Set the time period between service calls in days. You can select the frequency of service calls from between one a day to one every 365 days.

When you select this command the screen shows the current value of the Interval in days.

Key in the number of days you require. Use leading zeroes for day numbers under 100. (You can also press **[↑]** or **[↓]** to increase or decrease the number of days one at a time.) Press **[ENT]** to finish.

6 – Call Back

There are two methods of connecting a service call from the control unit: either "direct in" or "call-back".

For a "direct-in" call, the control unit simply dials the specified number, identifies itself to the service centre, and then waits for commands from the Downloader.

For a "call-back" call, the control unit calls the service centre, identifies itself using a Panel Site ID, and then tells the service centre to call the control unit. The service centre then calls the control unit and establishes a connection.

"Call-back" calls only work on scheduled remote service calls. If you start a manual service call then the PC will not "call-back" to the panel.

The options available in this command are:

Disabled – The control unit dials the telephone number selected in option 2-5-1-6-2 and tries to establish a "direct-in" call.

Enabled – The control unit dials the telephone number selected in option 2-5-1-6-2 and tries to establish a "call-back" call.

Note: To use "call-back" set option 2-5-1-3 (Access Mode) to "unattended".

When you select this command the screen shows the currently selected Call-back option. Either: press 1 to select Disabled or 2 to select Enabled. (You can also select one or other option by pressing  or .) Press  to finish.

7 – Walk Test Alerts

Use this option to provide a regular reminder to the user to carry out a walk test. When this option is enabled, the control unit produces an alert on the keypad display at the programmed day and time, and logs the fact that it has given an alert. The user can acknowledge the alert and if desired carry out a walk test. The user can ignore the alert and still set the system.

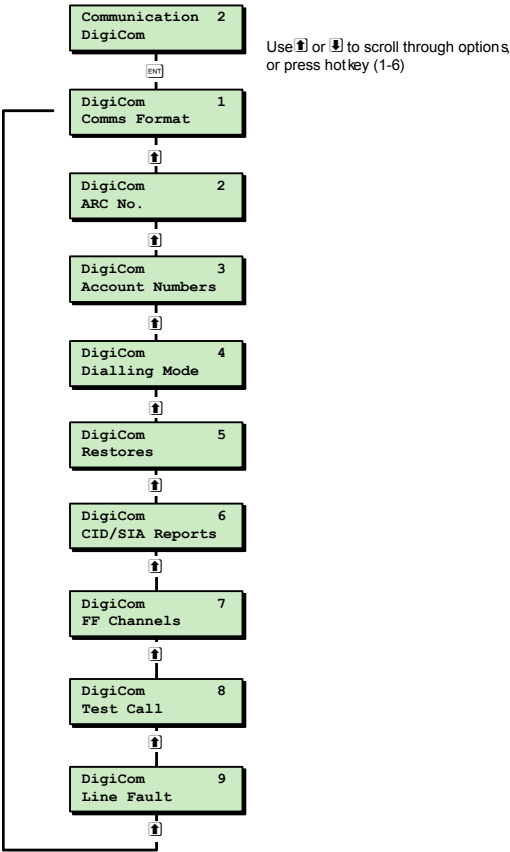
When you select this option, the screen shows the current value. **Either:**

Press 8 to disable Walk Test Alerts, **or:**

Press 1 to 7 followed by  to select Sunday to Saturday as the day of the week on which the reminder will appear (you cannot select more than one day in the week).

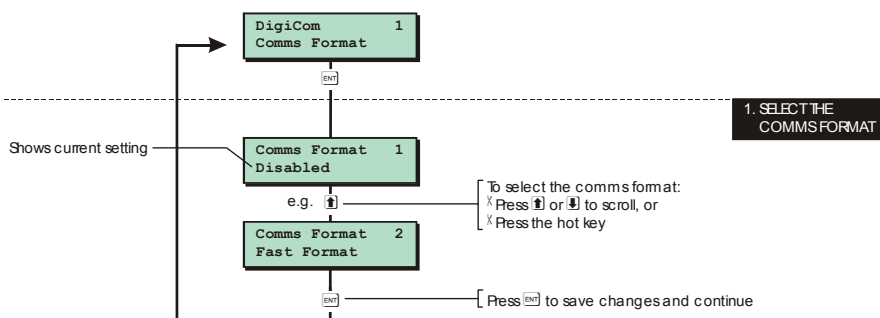
When the top line of the display shows "Walk Test Alerts", key in the time of day at which you want the reminder to appear (use the 24 hour clock). Press  to finish.

Option **2-5-2**: - Setting Up the DigiCom



The options in the DigiCom menu determine the settings for communications with an Alarm Receiving Centre (ARC) via the on-board modem. The options in the DigiCom menu are described next.

Option 2-5-2-1 - Specifying the Communications Format



Use this option to specify the communications format in which to send data to the ARC. Contact the Alarm Receiving Centre (ARC) for the option that you should use. The following options are available:

1 – Disabled

This option disables communications to the ARC. This option must be selected if a phone line is not connected to the panel, otherwise "PSTN Line Fault" alerts will be generated.

2 – Fast Format

This is Scancom Fast Format; the format most widely used in the UK. When using the Fast Format, each message transmitted to the ARC consists of the following:

A 4-digit or 6-digit account number. The account number is 1 for system, zone, user or group output types. For ward output types, the account number is 1 for ward 1 events, 2 for ward 2 events, etc.

8 or 16 channels of data, as determined by option 2-5-2-7 (page 119). Each channel communicates the status of an output, as programmed using the Digi On Board outputs (page 41). The value of the channel can be:

- 1 = new alarm and not previously reported
- 2 = status of output is open/unset (Certain output types indicate an open/closed or set/unset status, such as System Set, System Full Set and System Open; see page 44. A value of 2 is used when the output indicates an unset status.)
- 3 = alarm restored and not previously reported
- 4 = status of output is closed/set (Similar to 2, but indicates the opposite status.)
- 5 = not in alarm
- 6 = in alarm but previously reported

A test signal.

 The Restore Signals option in Engineer 2-5-2-5 (page 118) determines whether restore messages are sent to the ARC.

3 – Contact ID

The Contact ID format automatically transmits data from the event log to the Alarm Receiving Centre (ARC). Examples of messages that use the Contact ID format are:

Example 1 - 1234 18 1137 01 015 2

1234 is the account number, as specified in option 2-5-2-3 (page 117).

18 is the message type used to identify the message as Contact ID.

1137 is the event qualifier for a new event (1), followed by the event code for a system tamper alarm (137).

01 is the ward number.

015 is the zone number.

2 is the checksum value, which the ARC needs to verify to confirm a valid message has been received.

Example 2 - 1234 18 3137 01 015 F

The only difference between this and the first example, is the event qualifier of 3 to indicate a restore of a system tamper alarm, and the checksum value.

☞ *The Restore Signals option in Engineer 2-5-2-5 (page 118) determines whether restore messages are sent to the ARC.*

☞ *The Tampers As Alarm/Tamps option in Engineer 1-9-3 (page 91) determines whether tamper conditions are sent as event code 130 or 137.*

Table 5 (see page 112) shows the events that are transmitted to the ARC, depending on the reporting level set in option 2-5-2-6 (page 119).

4 to 7 – SIA 1, SIA 2, SIA 3 and Extended SIA 3

The SIA formats automatically transmit data from the event log to the ARC. The four SIA formats differ in the amount of data transmitted with each message:

SIA1 format is: #AAAAAA|NCCcc

SIA2 format is: #AAAAAA|Nidnnn/rinn/CCcc

SIA3 format is: #AAAAAA|Ntihh:mm/idnnn/rinn/CCcc
#AAAAAA|AS

Extended SIA 3 format is: #AAAAAA|Ntihh:mm/idnnn/rinn/CCcc/AS

Where:

AAAAAA = 6-digit programmable account code (e.g. 123456), as specified in option 2-5-2-3 (page 117).

N = New Event (always N).

tihh:mm/ = time (e.g. ti10:23/).

idnnn/ = user number, if applicable; otherwise not sent (e.g. id123/ or id6/).

rinn/ = ward no. (e.g. ri12/ or ri3).

CC = event code (e.g. FA = Fire Alarm).
cc = zone or keypad number, if applicable; otherwise not sent (e.g. 23 or 5).
AS = text description of event.

For example, if there is a fire alarm on zone 2 of ward 6 at 10:15 (ward 6 account number is 10), the message would be:

SIA1: #000010|NFA2
SIA2: #000010|NFA2/ri6
SIA3: #000010|Nti10:15/FA2/ri6
#000010|AFire Zone 6
Extended SIA3: #000010|Nti10:15/FA2/ri6/AFire Zone 6

Table 5 (see page 112) shows the events that are transmitted to the ARC, depending on the reporting level set in option 2-5-2-6 (page 119).

 A Custom option can be selected in option 2-5-2-6; this allows the events transmitted to be selected using Downloader.

Table 5. CID and SIA Event Codes

Note: In this table “#” represents a digit.

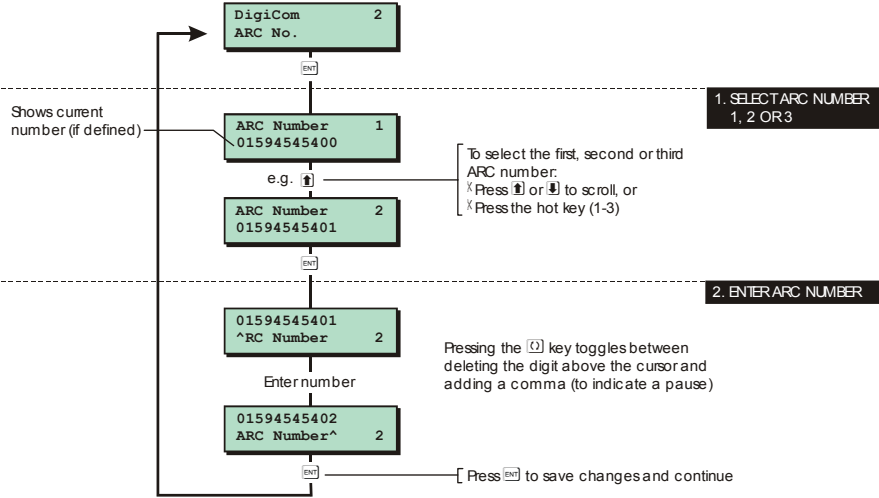
Log Message/Event	SIA CODE	CID	Basic	Summary	Intermediate	Full
### NODE R# LOST	TA	137	Y	Y	Y	Y
### NODE R# TAMP	TA	137	Y	Y	Y	Y
#### OMITTED	BB	573	Y	Y	Y	Y
### BAT MISSING	YM	311		Y	Y	Y
### BAT RESTORE	YR	311		Y	Y	Y
### BATT LOW	YT	311		Y	Y	Y
### DEVICE LOST	TA	137	Y	Y	Y	Y
### LEC LOST	TA	137	Y	Y	Y	Y
### LEC TAMPER	TA	137	Y	Y	Y	Y
### MAINS FAIL	AT	301		Y	Y	Y
### MAINS OK	AR	301		Y	Y	Y
### MSNODE FUSE	YP			Y	Y	Y
### MSNODE LOST	TA	137	Y	Y	Y	Y
### MSNODE TAMP	TA	137	Y	Y	Y	Y
### NODE FUSE	YP			Y	Y	Y
### NODE LOST	TA	137	Y	Y	Y	Y
### NODE TAMPER	TA	137	Y	Y	Y	Y
### PSU FUSE	YP			Y	Y	Y
### PSU TAMP	TA	137	Y	Y	Y	Y
### RADIO FUSE	YP			Y	Y	Y
### RADIO TAMP	TA	137	Y	Y	Y	Y
### REM LOST	TA	137	Y	Y	Y	Y
### REM TAMPER	TA	137	Y	Y	Y	Y
### RF JAMMED	XQ	380			Y	Y
24H RESTORE ####	BR	130	Y	Y	Y	Y
24Hr ALARM ####	BA	130	Y	Y	Y	Y

Log Message/Event	SIA CODE	CID CODE	Basic	Summary	Intermediate	Full
ALARM #####	BA	130	Y	Y	Y	Y
ATE L.F. ALL	LT	351	Y	Y	Y	Y
ATE L.F. RESTORE	LR	351	Y	Y	Y	Y
ATE L.F. SINGLE	LT	351	Y	Y	Y	Y
AUTOSET 1 OFF	OP	401			Y	Y
AUTOSET 1 ON	CL	401			Y	Y
AUTOSET 2 OFF	OP	401			Y	Y
AUTOSET 2 ON	CL	401			Y	Y
AUTOSET 3 OFF	OP	401			Y	Y
AUTOSET 3 ON	CL	401			Y	Y
AUX RESTORE #####	YQ			Y	Y	Y
AUXILIARY #####	UA	150	Y	Y	Y	Y
Auxiliary 1 Tamp	TA	137	Y	Y	Y	Y
Auxiliary 2 Tamp	TA	137	Y	Y	Y	Y
AUXILIARY FUSE	YP			Y	Y	Y
Battery Fault	YT	311		Y	Y	Y
BELL FUSE	TA	137	Y	Y	Y	Y
BELL TAMP OMIT	BB	573	Y	Y	Y	Y
CHANGE CODE ##	JV	461				Y
CHANGE TAG ##	JV	461				Y
CODE TAMPER	JA	461				Y
COMMS FAILED	YC	350				
COMMS TEST CALL	RP	602	Y	Y	Y	Y
DATE CHANGED AT	JT	625				Y
DATE CHANGED TO	JT	625				Y
DEFAULT USER	JX					Y
DEFAULT USER ##	JV	461				Y
DEFERRED SET:-	CE					Y
DL DISCONNECT FL	RU	412				Y
DL DISCONNECT OK	RS	412				Y
DURESS CODE ##	HA	121	Y	Y	Y	Y
ENG HW DEFAULTED	JV	461				Y
ENGINEER ARRIVES	LB	627				Y
ENGINEER DEPARTS	LS	628				Y
ENTRY TIME-OUT:-	BA	130	Y	Y	Y	Y
EXT LINE FAULT	LT	351	Y	Y	Y	Y
EXT LINE RESTORE	LR	351	Y	Y	Y	Y
FAULT 4K4 #####	IA	389		Y	Y	Y
FIRE ALARM #####	FA	110	Y	Y	Y	Y
FIRE RESET. #####	FR	110	Y	Y	Y	Y
HI-SECURITY SET:	CL	401			Y	Y
ID LOOP RESTORED	TR	137	Y	Y	Y	Y
ID LOOP SHORTED	TA	137	Y	Y	Y	Y
KEYPAD PANIC ###	PA	123	Y	Y	Y	Y
LOCAL ON LINE	RB	412				Y
LOCKSET ##### ON	CL	409			Y	Y
LOCKSET ##### OFF	OP	409			Y	Y
LOCKSET WARD ON	CL	409			Y	Y

Log Message/Event	SIA CODE	CID CODE	Basic	Summary	Intermediate	Full
MASK ALRM S #####	BT	380		Y	Y	Y
MASK ALRM U #####	BT	380		Y	Y	Y
MASK FLT S #####	BT	380		Y	Y	Y
MASK FLT U #####	BT	380		Y	Y	Y
MASK TMP S #####	BT	380		Y	Y	Y
MASK TMP U #####	BT	380		Y	Y	Y
NETWORK # FUSE	TA	137	Y	Y	Y	Y
NODE TAMP OMIT	BB	573	Y	Y	Y	Y
NORM. REST. #####	BR	130	Y	Y	Y	Y
OCCUPANCY SET	CL	401			Y	Y
ON LINE TO #	RB	412				Y
PA ALARM #:#:#:#	PA	123	Y	Y	Y	Y
PANEL BATT LOW	YT	311		Y	Y	Y
Panel Lid Tamper	TA	137	Y	Y	Y	Y
PANEL MAINS OFF	AT	301		Y	Y	Y
PANEL MAINS ON	AR	301		Y	Y	Y
PANEL TAMP OMIT	BB	573	Y	Y	Y	Y
PANIC ALARM #####	PA	120	Y	Y	Y	Y
PANIC CODE ##	PA	123	Y	Y	Y	Y
PANIC REST. #####	PR	120	Y	Y	Y	Y
PNL BATT MISSING	YM	311		Y	Y	Y
PNL BATT RESTORE	YR	311		Y	Y	Y
PSTN FAULT	LT	351	Y	Y	Y	Y
PSTN RESTORE	LR	351	Y	Y	Y	Y
PSU BATT A #####	YP			Y	Y	Y
PSU BATT H #####	YQ			Y	Y	Y
PSU FUSE A #####	YP			Y	Y	Y
PSU FUSE H #####	YQ			Y	Y	Y
PSU PWR A #####	YP			Y	Y	Y
PSU PWR H #####	YQ			Y	Y	Y
REARM ,OMIT #####	BB	573	Y	Y	Y	Y
REARM SYSTEM	OR	305		Y	Y	Y
REM RESET PASSED	OR	305		Y	Y	Y
REM TAMPER	TA	137	Y	Y	Y	Y
RESET WARDS:-	OR	305		Y	Y	Y
SET EXT L.FAULT	CL	401			Y	Y
SET FAIL WARDS:-	EA		Y	Y	Y	Y
SET GENERAL FLT	CL	401			Y	Y
SET PSTN FAULT	CL	401			Y	Y
SET PSU BATT FLT	CL	401			Y	Y
SET PSU FUSE FLT	CL	401			Y	Y
SET PSU PWR FLT	CL	401			Y	Y
SET SUPER WARN:-	BB	573	Y	Y	Y	Y
SET WARDS:-	CL	401			Y	Y
SET WITH AC FAIL	CL	401			Y	Y
SET WITH FLT 4K4	CL	401			Y	Y
SET WITH MSK FLT	CL	401			Y	Y
SET ZNS OMTTED:-	BB	573	Y	Y	Y	Y

Log Message/Event	SIA CODE	CID CODE	Basic	Summary	Intermediate	Full
SET ZNS SHNTD:-	BB	573	Y	Y	Y	Y
SHUNT ZONE #####	BB	573	Y	Y	Y	Y
SILENT PA #####	HA	122	Y	Y	Y	Y
SILENT PA #:#:#	HA	122	Y	Y	Y	Y
SUMMER CHANGED	JT	625				Y
SUMMER CHANGED	JT	625				Y
SUMMER TIME SET	JT	625				Y
TAMP ZONE #####	TA	137	Y	Y	Y	Y
TAMP. REST. #####	TR	137	Y	Y	Y	Y
TAMPER #####	TA	137	Y	Y	Y	Y
TC #:#:# BAT LO	YT	311		Y	Y	Y
TC #:#:# BAT OK	YR	311		Y	Y	Y
TECHNICAL #####	UA	150	Y	Y	Y	Y
TEST ZONE #####	BB	573	Y	Y	Y	Y
TIME CHANGED AT	JT	625				Y
TIME CHANGED TO	JT	625				Y
TX #:#:# BAT LO	YT	311		Y	Y	Y
TX #:#:# BAT OK	YR	311		Y	Y	Y
TX #:#:# SUP FL	BZ	381			Y	Y
UNSET WARDS:-	OP	401			Y	Y
USER ## DELETED	JX					Y
WARD CONFIRMED:-	BV	139	Y	Y	Y	Y
WARDS LOCKED:-	CL	409			Y	Y
WARDS UNLOCKED:-	OP	409			Y	Y
WINTER CHANGED	JT	625				Y
WINTER CHANGED	JT	625				Y
WINTER TIME SET	JT	625				Y

Option 2-5-2-2 - Specifying the ARC Number

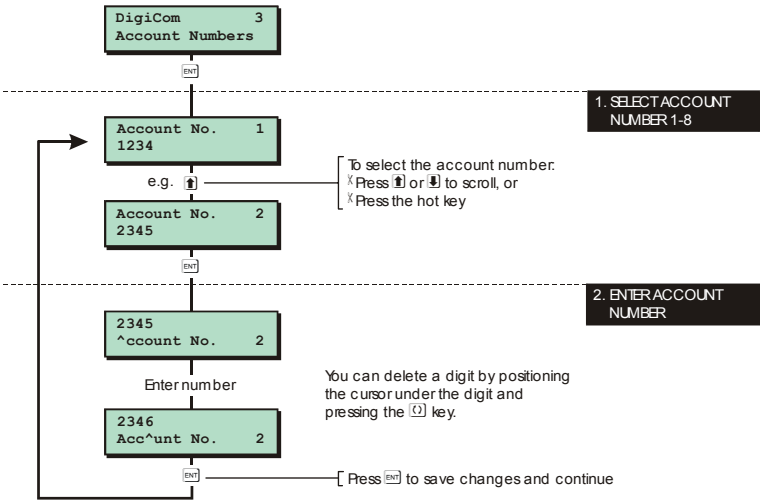


Use this option to specify the telephone numbers of up to three Alarm Receiving Centres (ARC).

You can use the **[^]** key to insert a 4-second pause between any two digits of the telephone number (see page 105 for further details).

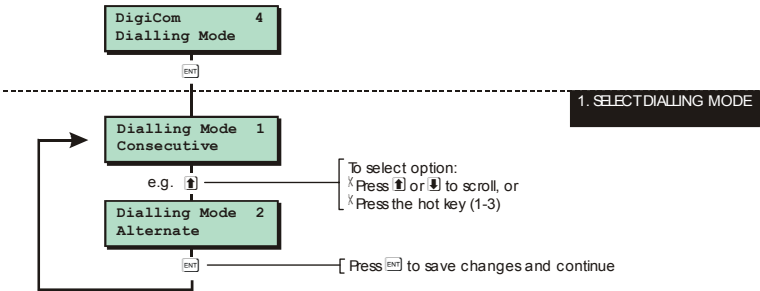
Depending on the Dialling Mode setting (page 117), alarms can be communicated to more than one ARC. Specify the ARC telephone numbers in order of priority (i.e. the ARC you want to use most often should be ARC number 1).

Option **[2]-[5]-[2]-[3]** - Specifying the ARC Account Number



Use this option to specify the Alarm Receiving Centre (ARC) account number that the panel should provide when calling the ARC. You can enter any character from the keypad (see Appendix A).

Option **[2]-[5]-[2]-[4]** - Specifying the Dialling Mode



Choose one of the following:

1 – Consecutive

If you have defined more than one ARC (page 116), the panel will attempt to contact the first ARC when an alarm occurs. If there is no connection, the panel attempts again several times, with a fixed delay between each attempt. If there is no connection, the panel tries to contact the second ARC in the same manner. If there is no connection with the second ARC, the panel tries to contact the final ARC before closing communication.

2 – Alternate

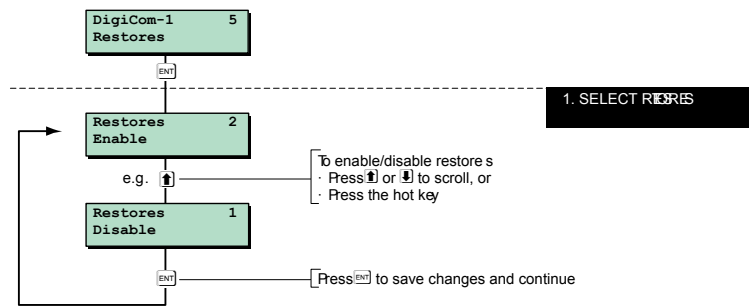
This is similar to the Consecutive option, but the panel attempts to connect to each ARC only once before attempting the next. Once the last number has been attempted, the system returns to the first and the sequence continues.

3 – All

With this option selected, the panel sends the alarm to all defined ARCs. The panel will continue to attempt a connection to each ARC until the alarm has been sent to all of them. Each telephone number is attempted a maximum of 15 times.

This option is applicable only if Fast Format is used (page 110). If SIA or Contact ID is used, selecting All results in the same operation as the Alternate option.

Option 2 - 5 - 2 - 5: Configuring Restores



You can use this option to specify whether or not to send "restore" messages to the ARC:

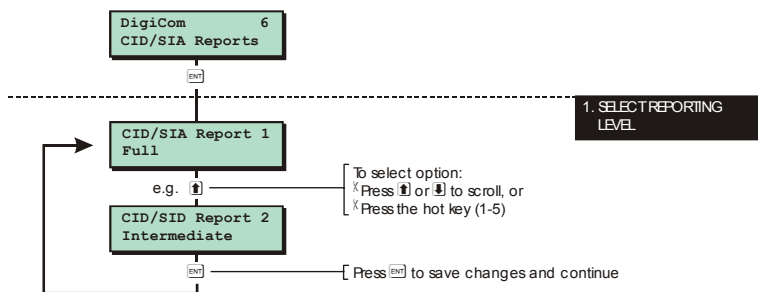
1 – Restore Signals Enabled

If you enable restores, the control unit sends both alarm and restore signals to the ARC. For example, for a normal zone alarm, a restore message would indicate that the alarm has been reset (this is not the same event as silencing the external sounders).

2 – Restore Signals Disabled

If you disable restores, the control unit will send alarm messages to the ARC, but will not send restore messages.

Option [2]-[5]-[2]-[6] - CID/SIA Reports



If you are using an Contact ID or SIA communications format, choose Full, Intermediate, Summary, Basic or Custom to specify the types of events to transmit to the ARC. Please refer to page 112 for further information. You should use the Custom option only if you have used the Downloader software to specify which events to communicate to the ARC.

Option [2]-[5]-[2]-[7]: FF Channels

Choose whether to transmit 8 or 16 channels of data if using the Fast Format. The data transmitted by each channel is determined by Option [1] - [4]: Digi On Board Outputs programming.

Option [2]-[5]-[2]-[8]: Test Call

You can use this option to make the control unit start a test call immediately. The control unit calls the ARC numbers using the call format you have set up.

Option [2]-[5]-[2]-[9]: Line Fault

You can use this option to enable or disable monitoring of line faults on the telephone line to the ARC. Enabling line fault monitoring activates outputs of type PSTN Line Fault when a line fault occurs.

Option [2]-[5]-[3]: Starting a Call Back

You can use this option to initiate a connection over the telephone line to a remote site that is running the Downloader software. Once the communication link is established, the remote site can upload data and change settings in the control unit.

Press [1] or [2] to choose one of eight call-back numbers (telephone numbers) to call and press [ENT]. (Use engineer option [2]-[5]-[1]-[4] set up the call-back numbers.)

An alternative method of making a connection between the control unit and Downloader PC is to set the access mode to Unattended or Secure Call Back. This allows the panel to respond to calls that have originated from the remote site.

Once you have selected the telephone number to use press [1] or [2], or key a number between 1 and 5 to select one of the following options:

Option **2-5-3-1** - Connect

Establish a connection with the PC running Downloader, but take no further action. (The specific account for the control unit must be open on Downloader before you start the call.)

Option **2-5-3-2** - Upload from PC*

Once connected, Downloader sends configuration data to the control unit, and then drops the connection.

Option **2-5-3-3** - Download to PC*

Once connected, the control unit sends configuration data to Downloader, and then drops the connection.

Option **2-5-3-4** - Diagnostic*

Once connected, Downloader performs a simple remote service check and then drops the connection. Downloader ignores any log event data or configuration data. The control unit does NOT change the next remote service date and time.

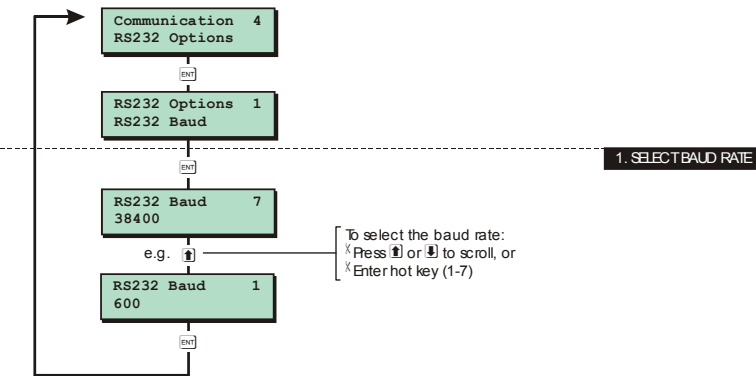
Option **2-5-3-5** - Remote Service*

Once connected, Downloader performs the full remote service call and then drops the connection.

**Note: For options 2 to 5, Downloader must have all accounts closed before you start the call.*

Option **2-5-4**: Setting Up the RS232 Port

Option **2-5-4-1**: Setting the Baud Rate



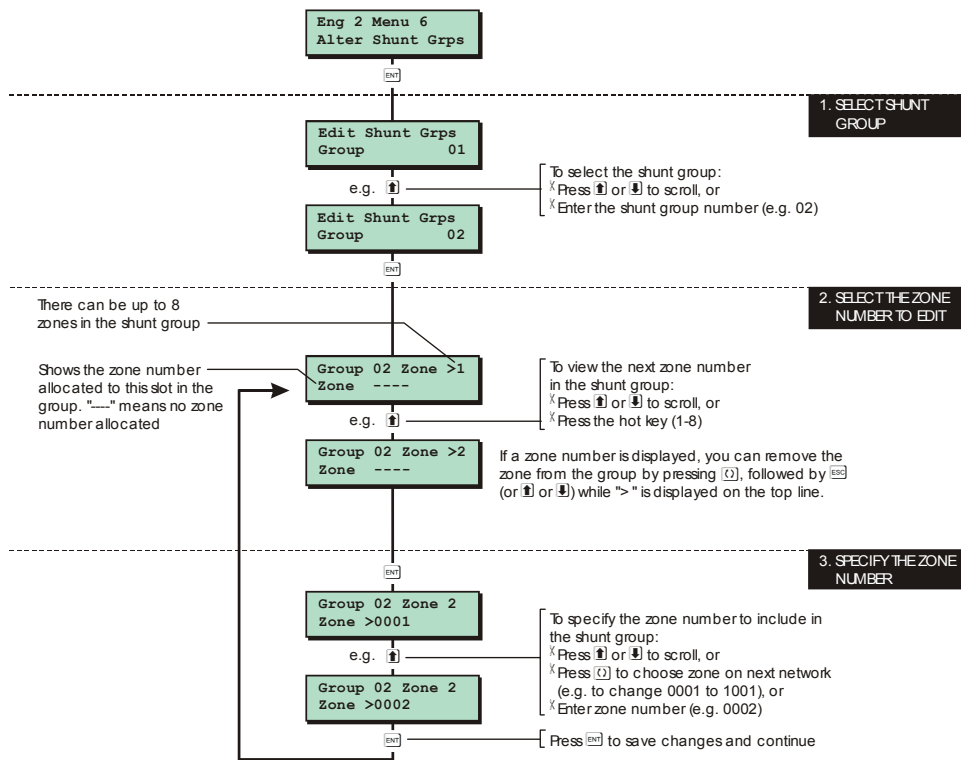
This option allows you to set the baud rate for the serial (RS232) port.

- ☞ This option is available for M2000 panel only.
- ☞ Use a baud rate of 38400 when using the Downloader software.
- ☞ Use a baud rate of 9600 when using an IRIS IP dialer for Downloader.

Option 2-5-4-2: Enabling the WebWayOne Interface

The Remote Modem option is used to enable the panel to interface with WebWayOne IP communicators. Do not change the default setting of "Disable" without being instructed by your Alarm Transmission System (ATS) supplier.

Option 2-6: Setting Up Shunt Groups



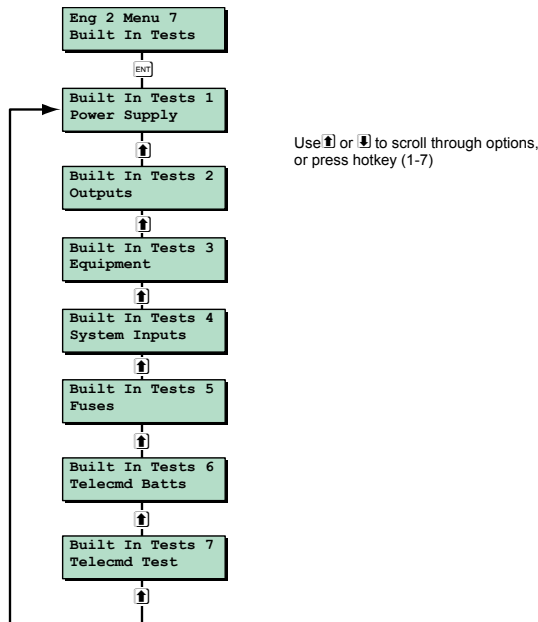
Shunt groups provide a simple way to isolate zones until further notice.

Each shunt group can contain up to eight zones, and each group can be allocated to a user of type "Shunt" (User option 2-4; see the *Manager's Manual*). When the user's code is first entered, the zones are isolated. When the code is entered again, they are reinstated.

Although 24-hour zones are most commonly isolated, any zone can be assigned to a shunt group.

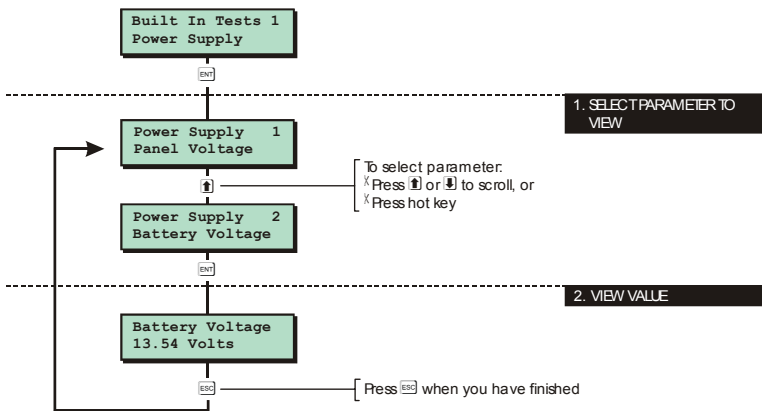
- ☞ Any zone selected must have the Shutable attribute (page 29).
- ☞ Reinstating zones may start the exit timer, depending on whether Unshunt, No Exit or Unshunt & Exit is selected (page 87).

Option **2-7**: Running Built-in Tests



You can use the options in the Built In Tests menu to test the system hardware.

Option **2-7-1**: Testing the Power Supply



1 – Panel Voltage

Displays the output voltage supplied to the auxiliary power terminals and peripherals such as keypads. To ensure that peripherals function correctly, the voltage should remain between 11 and 14Vdc. A voltage below this range may be caused by an excessive load or a power supply fault. The accuracy of this measurement is $\pm 0.2V$.

2 – Battery Voltage

Displays the battery charging voltage at the control panel. The accuracy of this measurement is $\pm 0.2V$.

3 – Charge Voltage

Displays the battery charging voltage at the control panel. The accuracy of this measurement is $\pm 0.2V$.

4 – Charge Current

Displays the battery charging current. Depending on the capacity of the battery used, this may be up to 750mA. The value will be zero if the Discharge current (see below) is not zero.

5 – Discharge Current

Displays the current drawn from the battery, when the panel is powered from the battery

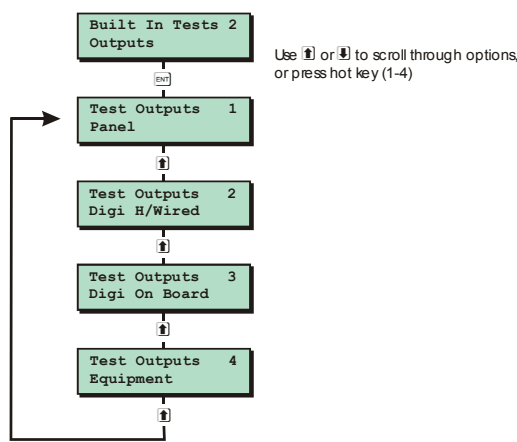
6 – Load Current

Displays the total current drawn from the control panel's power supply, excluding the battery load. The accuracy of this measurement is $\pm 50mA$. The Load + Charge current should not exceed 1.5A for an M800 or M2000 panel.

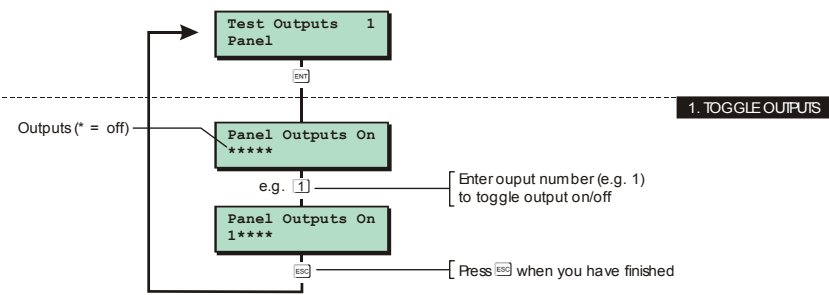
7 – Source Current

Displays the total current flowing into the panel through the 12Vdc auxiliary power terminals. The value should be zero if the panel is correctly connected.

Option **2-7-2**: Testing Outputs



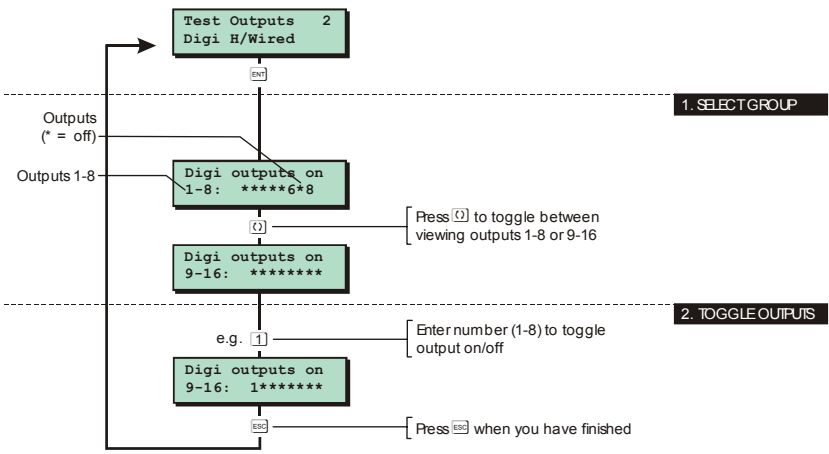
Option 2-7-2-1 - Testing the "Panel" Outputs



This option allows you to switch outputs 1 to 5 on and off. Outputs 1 and 2 are relay outputs. Outputs 3, 4 and 5 are transistor outputs. Switching on an output should cause the appropriate output LED on the PCB to illuminate.

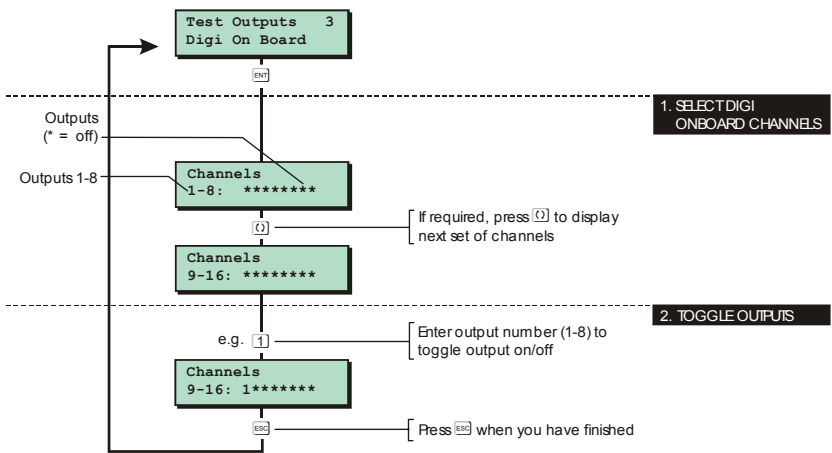
Outputs 2 and 5 are not available on an M800.

Option 2-7-2-2 - Testing the Digital Communicator Outputs



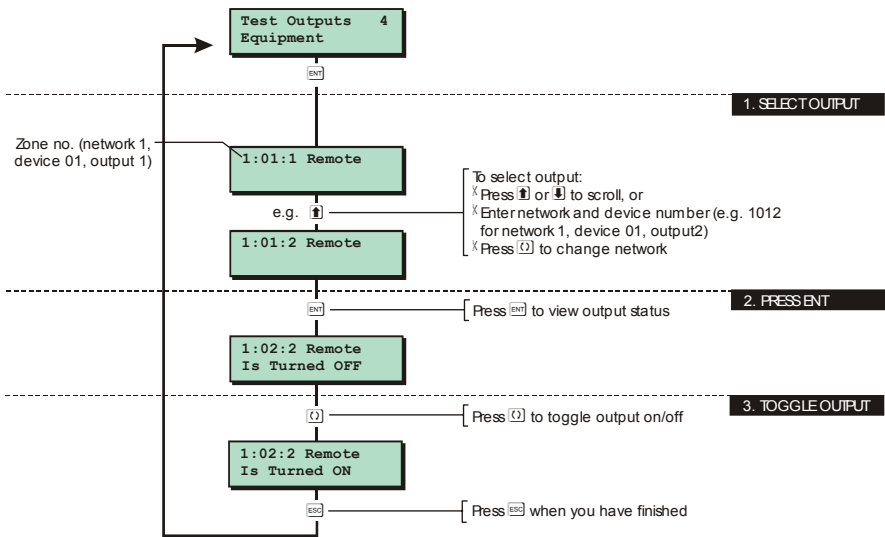
This option allows you to switch the digital communicator outputs on and off.

Option 2-7-2-3 - Testing the Digi On Board Channels



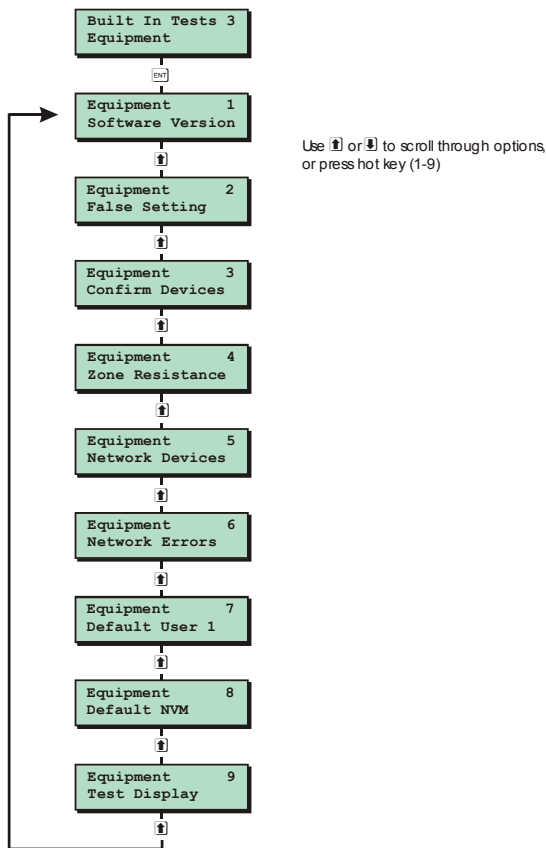
This option allows you to switch on or off the 16 digi on-board channels (the 16 "software" outputs, the status of which are transmitted via the on-board modem port). You will need to contact the Alarm Receiving Centre (ARC) for verification that the channels are functioning correctly.

Option 2-7-2-4 - Testing Equipment Outputs



This option allows you to switch outputs connected to network devices, such as keypads, on and off.

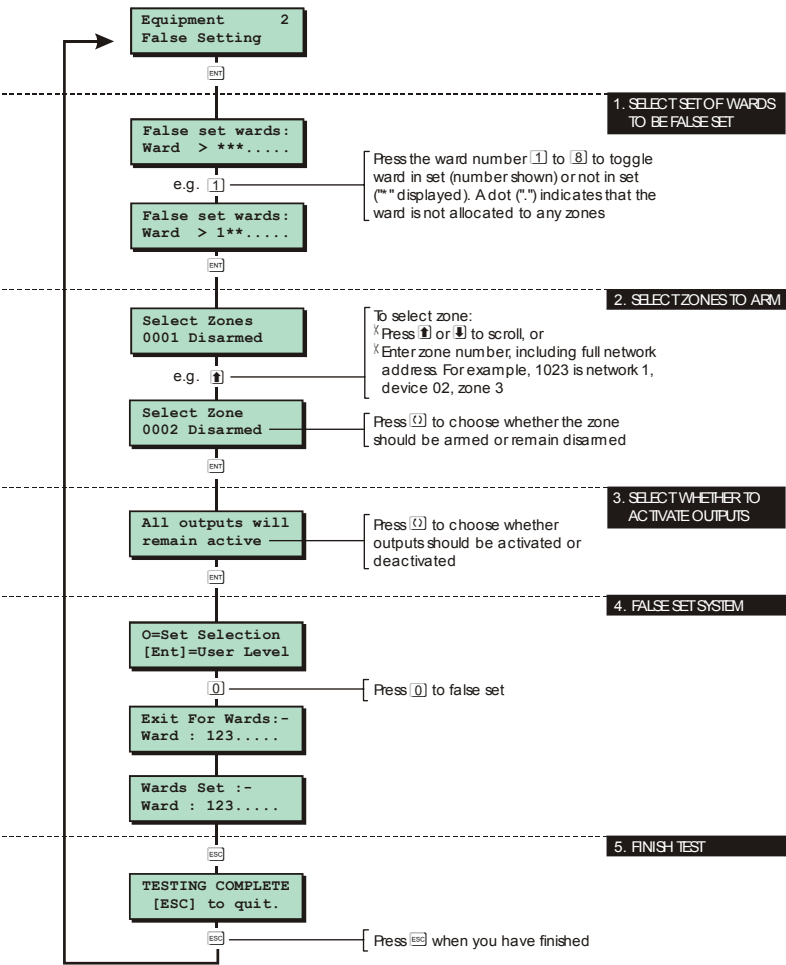
Option **2-7-3**: Performing Equipment Tests



Option **2-7-3-1** - Determining the Software Version

Select this option to find out which version of firmware the panel is currently using.

Option 2-7-3-2 - False Setting the System

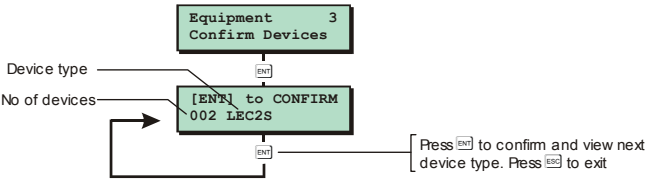


This option allows you to set the system while the premises are occupied. You can choose the following:

- 1. The wards to set.
- 2. The zones to activate. Excluded zones are isolated.
- 3. Whether to enable or disable all outputs (digicom, bell, strobe, etc.).

The system unsets the zones once you have finished the test.

Option [2]-[7]-[3]-[3] - Confirming the Network Devices

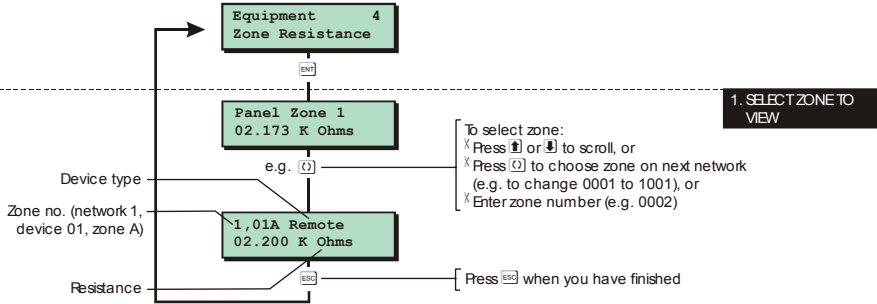


This option allows you to confirm the correct number of devices are connected to the network ports.

It is not normally necessary to use this option, since the procedure is started automatically when you enter your engineer code (if there have been changes to the devices attached).

☞ A keypad may be shown as a "LEC2". If a key is pressed at the keypad, it will be included in the remote keypad total the next time you use this option.

Option [2]-[7]-[3]-[4] - Checking a Zone's Resistance

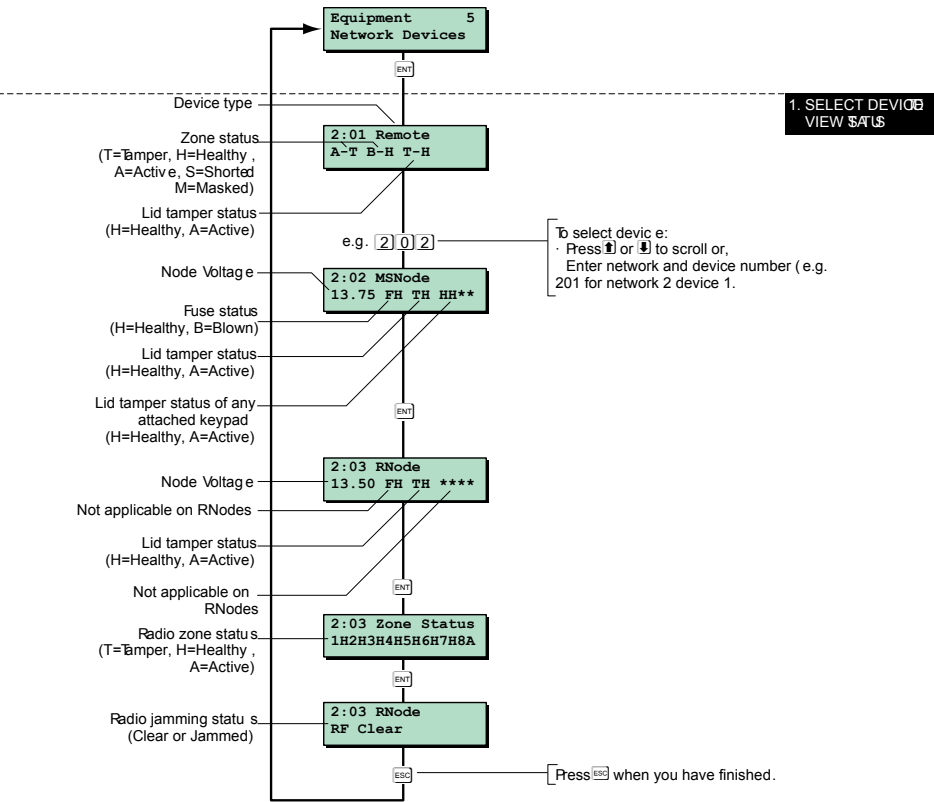


You can use this option to view the resistance at a zone. For zones connected to the panel, the accuracy of this measurement is better than 100 Ohms. An open circuit at a panel zone will display as 11.463k Ohms.

The displayed resistance value for zones connected to an MSNode, MSPSU or keypad are rounded and approximate.

Refer to page 98 for the expected resistance values for each condition at a zone.

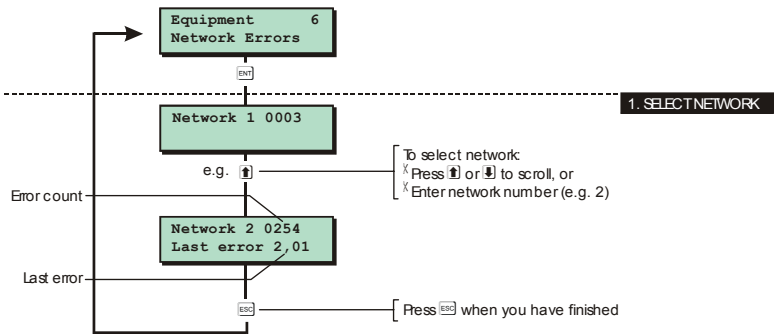
Option 2-7-3-5 - Checking the Status Network Devices



This option allows you to check the status of zones, tampers, fuses, etc. connected to devices on the network. The information displayed depends on the device type. Note that MRNodes may be listed as MSNodes for a short while after you first connect them to a network.

The keypad that you are using is the first device to be displayed.

Option [2]-[7]-[3]-[6] - Viewing Network Errors

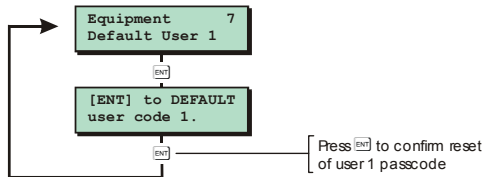


This option allows you to view the number of data transmission errors for each network.

You can re-set the error count to zero by pressing the 0 key. You may want to do this, then use the option again (e.g. in 20 minutes) to determine the number of errors that are occurring.

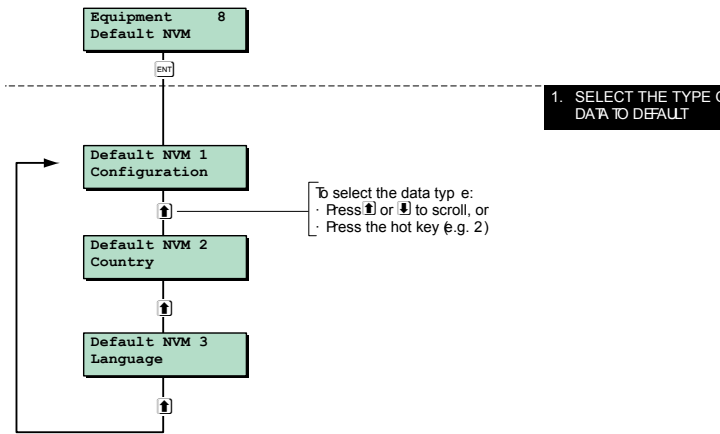
Transmission errors can be caused by poor terminations, intermittent cable faults, RF interference, voltage drops, earth faults, cables for different networks routed together and sounder cables routed with network cables. The system can operate with no ill effects with up to 20 errors in a 24-hour period.

Option [2]-[7]-[3]-[7] - Resetting User 1 (the default Manager User)



This option allows you to reset user 01 (a Manager user) back to the factory default code of 5678, or 567800 (if 6-digit user codes are used; see page 91). The operation is logged.

Option **2-7-3-8** - Applying Default NVM Settings



1 – Configuration

You can use this option to set specific categories of system settings back to the factory defaults. The default settings are listed in Table 6.

2 – Country

Use this option to select a set of defaults specific to a country. (Note that the build of software in the control unit may not support the country you require.)

For UK systems, this option provides access to PD6662 Grade 2 or Grade 3 defaults.

3 – Language

Use this option to select another language for the display. (Note that the build of software in the control unit may not support the language you require.)

Table 6. Default Settings

Settings Defaulted	Grade2 (Grade 3) Default Value
User 1-9 Engineer Access	Infinite (see note 1)
User 2-4 User Codes	
User 01 code	5678 (567800)
User 01 Wards	All
User name	User 001
User 02 and beyond	Not used
1-1 Zones	
Zone type (all zones)	Not Used (see note 2)
Zone description	Zone x
1-2 Zone Resistance	4K7/2K2
1-3-1 Ward Options - Equip To Wards	
All devices	All Wards
1-3-2 Ward Options - Attributes	
-01 Conf Reset	Wards: 1
-02 Unconf Reset	Wards: None
-03 Tamper Reset	Wards: All
-04 Remote Reset	Wards: None
-05 Panel Tamper	Wards: All
-06 Panel Speaker	Wards : All
-07 Aux/Bell Tamper	Wards: All
-08 Payment Timer	Wards: None
-09 Re-arms	Wards: None
-10 Secure Ward	Wards: None
-11 Bell and Strobe	Wards: All
-12 Foyer Mode	Wards: None
-13 Unset Fire	Wards: All
-14 Multiply Ack	Wards: None
-15 Entry Unset	Wards: All
-16 Entry=F/E	Wards: None
1-4-1 Outputs	
-01 Panel Output 1	Walk Test
-02 Panel Output 2	Courtesy Light
-03 Panel Output 3	Set Pulse
-04 Panel Output 4	Detector Reset
-05 Panel Output 5	Unset Pulse
1-4-2 Digi Hardwired	
-01 Digi H/Wired 01	Fire Alarm
-02 Digi H/Wired 02	PA
-03 Digi H/Wired 03	Alarm
-04 Digi H/Wired 04	System Set
-05 Digi H/Wired 05	Active Omit
-06 Digi H/Wired 06	Alarm Abort
-07 Digi H/Wired 07	Confirmed
-08 Digi H/Wired 08	Tamper Alarm
-09 Digi H/Wired 09	Panel Mains Off
-10 Digi H/Wired 10	General Fault
-11 Digi H/Wired 11	Tx Low Battery
-12 Digi H/Wired 12	Supervision Fail
-13 Digi H/Wired 13	RF Jammed
-14 Digi H/Wired 14	ATS Test
-15 Digi H/Wired 15	Always Off
-16 Digi H/Wired 16	Always Off
1-4-3 Digi On Board	
-01 Digi On Board 01	Fire Alarm
-02 Digi On Board 02	PA
-03 Digi On Board 03	Alarm
-04 Digi On Board 04	System Set
-05 Digi On Board 05	Active Omit
-06 Digi On Board 06	Alarm Abort
-07 Digi On Board 07	Confirmed
-08 Digi On Board 08	Tamper Alarm
-09 Digi On Board 09	Panel Mains Off
-10 Digi On Board 10	General Fault
-11 Digi On Board 11	Tx Low Battery
-12 Digi On Board 12	Supervision Fail
-13 Digi On Board 13	RF Jammed
-14 Digi On Board 14	Always Off
-15 Digi On Board 15	Always Off
-16 Digi On Board 16	Always Off
1-4-4 All Equipment O/Ps	Pending
1-4-5 All Output Module O/Ps	Always Off
1-5-1 Ward Tmr	
-01 Exit	030 Seconds
-02 Entry	015 Seconds
-03 Bell Delay	000 Minutes
-04 Bell Duration	015 Minutes
1-5-2 System Timers	
-01 Confirmation	030 Minutes
-02 Sys Bell Dly	000 Minutes
-03 Sys Bell Dur	015 Minutes
-04 Anti Mask	005 Seconds
-05 Line Fault	030 Seconds
-06 AC Off Delay	030 Seconds
-07 Soak Test	014 Days
-08 Exit Settle	005 Seconds
-09 2nd Entry Dly	000 Seconds
-10 Double Knock	010 Seconds
-11 Abort Period	060 Seconds
-12 Abort Delay	120 Seconds
-13 Courtesy Time	120 Seconds
-14 Menu Time-Out	180 Minutes
-15 Beam Pair	010 Seconds
-16 Defer Setting	060 Minutes
-17 Service Time	000 Days
-18 Select Menu	030 Seconds
-19 Keys Till Tamp	041 Counts
-20 No. of Rearms	000 Counts
-21 Remote Resets	032 Counts
-22 Double Knocks	002 Counts

-23 Tst Call Strt	000 Hours
-24 Tst Call Int	24 Hours
-25 Reset Alg	004 (021) (see note 4)
-26 Payment Time	000 Days
-27 Hi Security	020 Minutes
-28 Sup Warning	16 Minutes
-29 Sup Failure	120 Minutes
-30 Set Status	030 Seconds
-31 Defer Count	002 Counts
-32 A.Set Warning	010 Minutes
1-5-3 Timers Exceptions	
-01 to 30	None.
1-5-4 Auto-Sets	
-01 to 16	None
1-5-5 Time Switches	
-01 to 10	None
1-5-6 Code Locks	
-01 to 08	None
1-6 Setting Modes	
All Wards	Timed Exit (see note 3)
1-8-4 Setting Level Alarm Response	
	Full
1-9-1 General Configuration	
-01 Common Ward ON/OFF	OFF
-02 Bell is an SAB/SCB	SAB
-03 View Alms Unset/P.Set	Unset
-04 Engineer/User Authorised	Engr
-05 On-Line Enabled/Disabled	Enabled
-06 Unset/Set First	Unset
-07 Digi Normal/Inverted	Normal
-08 Chime Audible/Visible	Audible
-09 Manual/Automatic Omits	Manual
-10 Omit Tamperers Yes/No	No
-11 Global/Local Setting	Global
-12 Global/Local Unsetting	Global
-13 24hr Omit Global/Local	Global
-14 Ward/Global Bell Time	Ward
-15 Latching/Nonlatching Fire	Latching
-16 Timed/Latched code o/p	Timed
-17 Latching/Nonlatching 24hr	Latching
-18 Access code only/all	Code only
-19 NVM locked/unlocked	Unlocked
-20 Unshunt no exit/ &exit	No exit
-21 Ignore/View exit errors	Ignore
-22 Mimic all times/set only	All times
-23 Lo/Hi Security Eng	Lo
-24 Duress allow No/Yes	NO
-25 Keypad PA ON/OFF	OFF
-26 P.Set Hotkey	Yes
-27 Exit/Instant Set Foyer	Exit
-28 Unset Entry Wards/All	All
-29 Radio PA Silent/Audible	Audible

Settings Defaulted	Grade2 (Grade 3) Default Value
-30 Silent Alerts	N (audible)
-31 Bus Cut	Unconfirmed
1-9-2 DD243	
-01 Confirmation ON/OFF	ON
-02 Sounders on Unconf/Conf	Unconfirmed
-03 Bells on Unconf/Conf	Unconfirmed
-04 After Entry No/Yes	No
-05 Ent KPD Lock ON/OFF	OFF
-06 Confirm 2/1 Zones	2 Zones
1-9-3 EN50131	
-01 4/6 Digit Codes	4 (6)
-02 Internal/Local Sounder	Internal
-03 Instant/Delayed Alarm	Instant
-04 Tamperers As Alarm/Tamper	Alarm
-05 General Fault: User/Eng	User
-06 Tcmd Override Yes/No	No
-07 4k4=Masking/Fault	Fault
-08 Mask Override/Inhibit	Override
-09 Mask Unset Flt/Alm/Tamp	Fault
-10 Mask Set Flt/Alm/Tamp	Alarm
-11 AC Fail: No Rst/User/Eng	User
-12 AC Bypass: Always/Usr/Eng	Always
-13 Line Fail: No Rst/User/Eng	User
-14 L F Bypass: Alwys/Usr/Eng	Always
-15 Sup Fail Tamp/Alarm/Alert	Alert (Tamper)
-16 Reset Sup: Eng/Usr/Alwys	User (Eng)
-17 Reset Jam: Eng/Usr/Alwys	User (Eng)
-18 Battery Fault Alert Reset	Auto
-19 Batt. Low. Alert. Override	Never
-20 Status Display	Timed
-21 Maks As General Fault	No
2-2 Time and Date	
2-2-1 Set Time	00:00
2-2-2 Set Date	As per s/w date
2-4 User Codes	
2-4-1 Engineer code	1234 (123400)
2-4-2 Engineer Name	Engineer
2-5-1 Downloader	
2-5-1-1 Password	Blank
2-5-1-2 Site ID	Blank
2-5-1-3 Access Mode	Off
2-5-1-4 Call Back No.1, 2, 3, 4	Blank
2-5-1-5 Modern Options	
2-5-1-5-1 Rings to Answer	5 rings
2-5-1-5-2 Baud Rate	1200
2-5-1-5-3 Answer Phone Defeat	Disabled
2-5-1-6 Remote Service	
2-5-1-6-1 Enable	No
2-5-1-6-2 Call Number	Blank
2-5-1-6-3 Time Period	00:00

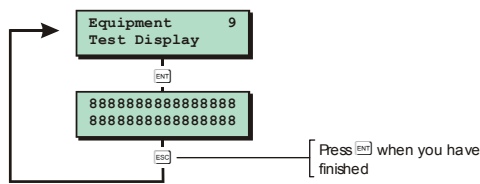
Settings Defaulted	Grade2 (Grade 3) Default Value
2-5-1-6-4 Next Service	00:00
2-5-1-6-5 Interval	180 Days
2-1-5-6-6 Call Back	Disabled
2-1-5-6-7 Walk Test Alerts	Disabled
2-5-2 DigiCom	
2-5-2-1 Comms Format	Disabled
2-5-2-2 ARC Nos. 1, 2, 3	Blank
2-5-2-3 Account Nos. 1, 2, 3	Blank
2-5-2-4 Dialling Mode	Consecutive
2-5-2-5 Restores	Enabled
2-5-2-6 CID/SIA Reports	Full
2-5-2-7 FF Channels	8 FF Channels
2-5-2-8 Test Call	N/A
2-5-2-9 Line Fault	Enabled
2-5-4 RS232 Options	
2-5-4-1 Baud Rate	38400
2-5-4-2 Remote Modem	Disabled
2-6 Shunt Groups	
Zones assigned	None

Settings Defaulted	Grade2 (Grade 3) Default Value
1-7 Custom Text	
1-7-1 Reset Message	CALL ENGINEER TO RESET SYSTEM
1-7-2 Location Text	PANEL LOCATION TEXT NOT SETUP
1-7-3 Printer Title	MENVIER SECURITY M- RANGE SYSTEM
1-7-4 Remote Reset Msg	RING A.R.C FOR REM. RESET CODE
1-7-5 Banner Text	Blank
1-7-6 Group Names	Blank

Notes:

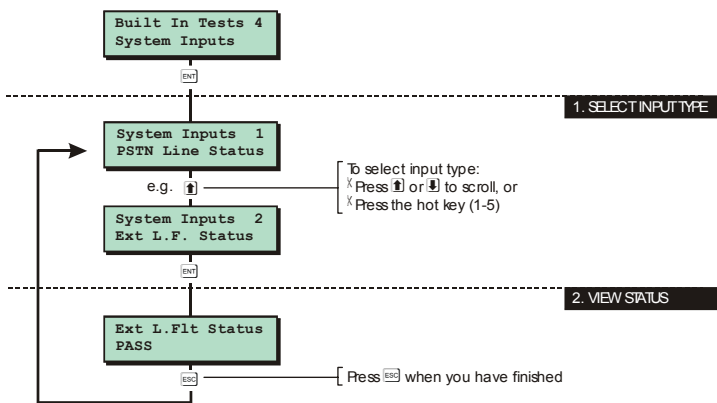
1. The control unit ignores this timer until the user accesses the menu. Once the user selects the menu the display shows 4 hours and the timer starts from there on.
2. For Grade 3 requirements, you may need to enable the Masking attribute on specific zones.
3. There are various options that you can select and still comply, for example: Final Exit, Exit Terminate, or Lock Set.
4. 21 is the lowest algorithm that generates 6 digit reset codes for Grade 3 requirements.

Option [2]-[7]-[3]-[9] - Built In Tests, Equipment, Test Display



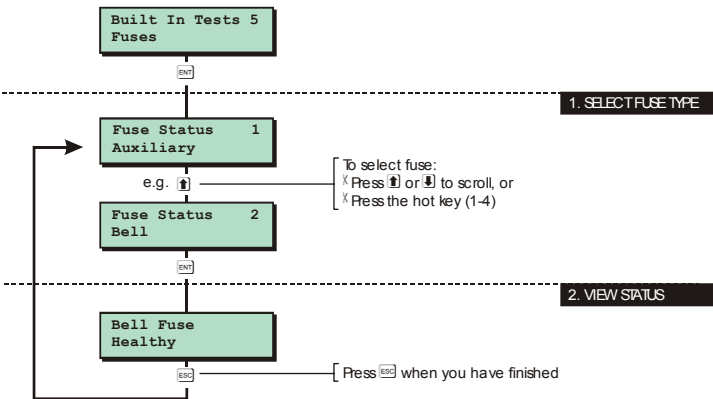
You can use this option to test the LCD on the keypad you are currently using. The "8" character should be displayed in each location of the LCD.

Option **2-7-4**: Checking the Status of System Inputs



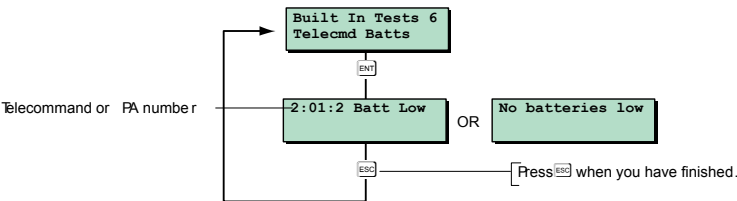
This option enables you to check the status of inputs to the control panel (e.g. the PSTN line status and the panel lid tamper).

Option **2-7-5**: Checking the Status of Fuses



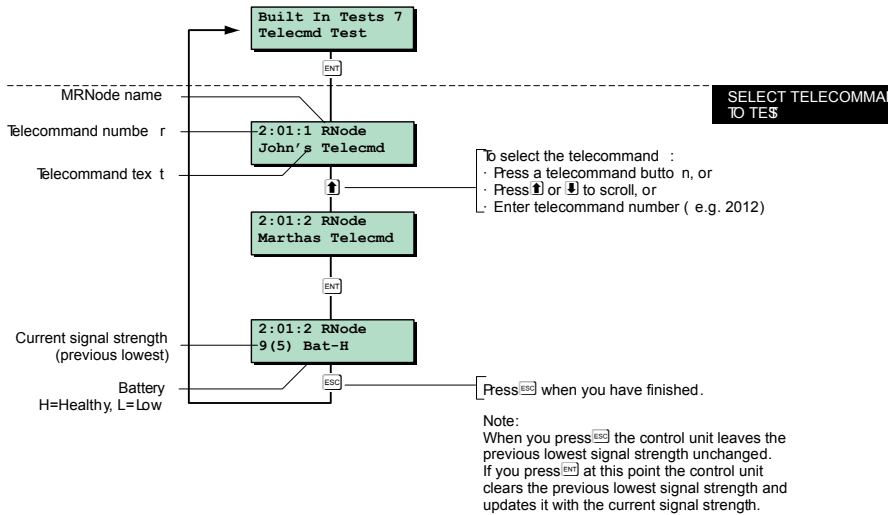
You can use this option to check the status of the automatically-resettable polyfuses on the control panel PCB. You need to remove the load completely to reset a fuse.

Option **2-7-6**: Checking the Telecommand Batteries



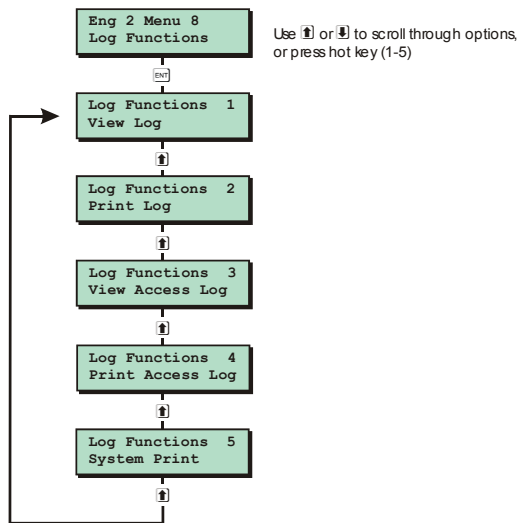
This option lists the Network:Node:Device number of any PA or telecommand that has sent a low battery signal.

Option **2-7-7**: Telecommand Test

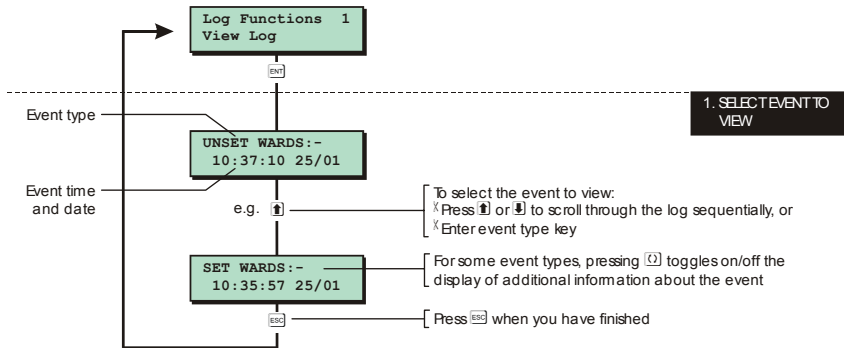


Use this option to test the signal strength and battery health of a telecommand.

Option **2-8-8**: Viewing or Printing the Log



Option **2-8-1**: Viewing the Event Log



You can use this option to view the system log. The log contains the date and time of system events, such as wards being unset, zones omitted, duress code activations and communications problems. For details of each event code displayed, see page 140.

The number of events recorded in the log is model specific.

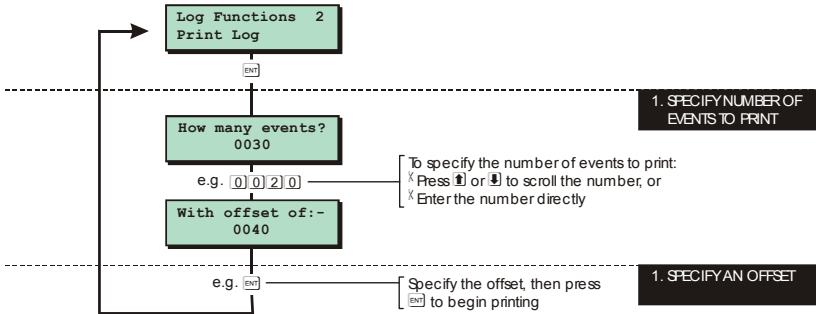
Press **↑** or **↓** to scroll through the log (**↑** displays earlier events).

You can enter one of the following keys to view events of a specific type. (You may have to wait a short period for the results to be displayed.)

- 1 Alarms
- 2 24 Hour Alarms
- 3 Fire Alarms
- 4 PA Alarms
- 5 Zone Tamperers
- 6 User Codes
- 7 Set Wards
- 8 Unset Wards
- 9 Entry

Pressing **[0]** allows you to view events from a specified offset (position) in the log.

Option **[2]-[8]-[2]**: Printing the Event Log



If a printer is connected to the control unit, you can print some or all of the events recorded in the log.

Choose the number of events to print, then press **[ENT]**. Similarly, specify the offset, then press **[ENT]**. If, for example, you choose to print 10 events with an offset of 50, the system will print events 50-59 (with event number 1 being the most recent). There may be more than one printed line per log event.

If you want to stop the current print job, select the option again, but specify zero for the number of events.

Once you have used the Print Log option, the system goes into online printing mode, where every action is immediately printed. Switch off the printer to stop all printing.

Option **[2]-[8]-[3]**: Viewing the Access Log

The access log stores every use of a user code of type Access (please refer to the *Manager's Manual*). Press **[↑]** or **[↓]** to scroll through the log (**[↓]** displays earlier events).

### LEC LOST	Network #, device No. ## is a LEC that has been removed
### LEC TAMPER	Network #, device No. ## is a LEC that has a tamper condition
### NODE ADDED	Network #, device No. ## is a Node that has been added to the system
### NODE FUSE	Network #, device No. ## is a Node that has a tripped fuse
### NODE LOST	Network #, device No. ## is a Node that has been removed
### NODE TAMPER	Network #, device No. ## is a Node that has a tamper condition
### PSU FUSE	Network #, device No. ## MSPSU keypad or Network fuse active
### PSU TAMP	There is a tamper on a smart PSU
### REM ADDED	Network #, device No. ## is a remote keypad that has been added to the system
### REM LOST	Network #, device No. ## is a remote keypad that has been removed
### REM TAMPER	Network #, device No. ## is a remote keypad that has a tamper condition
### RF CLEAR	Radio node not jammed
### RF JAMMED	Radio node jammed
### XNODE ADDED	Network #, device No. ## is a XNode/MSNode that has been added to the system
### XNODE FUSE	XNode/MSNode fuse failed
### XNODE LOST	Network #, device No. ## is a XNode/MSNode that has been removed
### XNODE TAMP	XNode/MSNode lid tamper
24 Hr WARDS:-	24 Hour Alarm on wards
24H RESTORE #####-	24 Hour Alarm on zone ##### reset
24Hr ALARM #####	24 Hour alarm from zone number #####
24HR OMIT:-	24 Hour group omitted in wards
24HR REINST:-	24 Hour group reinstated in wards
ABORT ON WARDS:-	Alarm aborted on wards
ACCESS #####	Passcode entered for user number #####
ACCESS FAILED	Access failed due to code lock in operation
ACCESS ZONE #####	Entry zone ##### activated
ALARM #####	Alarm from zone number #####
ALARM WARDS:	Alarm in wards
ATE L.F. ALL	All networks from a communicator to an ARC are unavailable
ATE L.F. RESTORE	The network connection from a communicator to an ARC has been restored
ATE L.F. SINGLE	A network connection from a dual-path communicator to an ARC is unavailable
AUTOSET # OFF	Autoset timer off
AUTOSET # ON	Autoset timer on
AUX RESTORE #####	Technical alarm from zone number ##### reset
BELL TAMPER	bell tamper
AUXILIARY #####	Technical alarm from zone number #####
AUXILIARY # TAMP	Not used
AUXILIARY FUSE	Auxiliary Fuse failed
BATTERY FAULT	Not used
BATTERY LOAD TST	Battery load test carried out
BATTERY LOW	Battery voltage is low
BATTERY MISSING	Battery is not connected
BATTERY RESTORE	Battery restored to healthy condition
BEAM PAIR #####	First activation of a beam pair zone number #####
BELL BOX TAMPER	Not used
BELL FUSE	Bell fuse tripped
BELL TAMP OMIT	Bell tamper omitted after confirmation timer has expired
BELL TESTED:-	Bell tested for wards
BELLS ACTIVE:-	Bell active for wards
CHANGE CODE ###	User code for user ### changed
CHNG CODE #####	User code changed for user #####
CHNG TAG #####	User tag changed for user #####
CNFG CHANGE #####	Configuration change for user #####

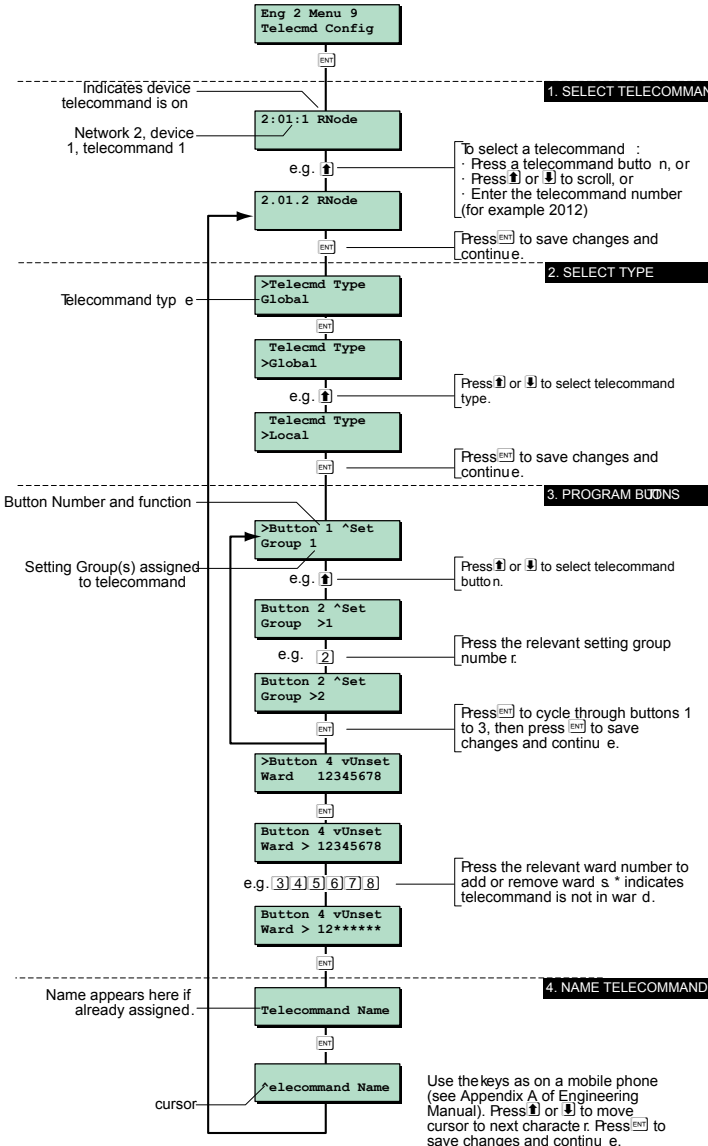
CODE #####	Passcode entered for user number #####
CODE LOCK # OFF	Code lock number # is off
CODE LOCK # ON	Code lock number # is on
CODE LOCKED #####	User number ##### attempted to use their passcode whilst locked-out
CODE TAMPER	Keypad locked out for 5 minutes due to invalid entry of passcode
COMMS FAILED	On-board modem failed to communicate with ARC
COMMS TEST CALL	Communications test call started
CONFIG CHANGE ##	Configuration change for user ##
DATE CHANGED AT	System date changed at
DATE CHANGED TO	System date changed to
DEFAULT USER	User 01 (manager) code defaulted
DEFAULT USER #####	Not used
DEFERRED SET:-	Deferred set on wards
DL DISCONNECT FL)	Downloader disconnected incorrectly
DL DISCONNECT OK	Downloader disconnected
DURESS CODE #####	Duress alarm from user number #####
ENG HW DEFAULTED	Panel factory reset
ENGINEER ARRIVES	Engineer is logged on the system
ENGINEER DEPARTS	Engineer is logged off the system
ENTRY TIME-OUT:-	Entry mode timed out for wards
ENTRY ZONE #####	Entry mode started from zone number #####
EXIT CANCELLED:-	Exit mode cancelled for wards
EXIT STARTED:-	Exit mode started for wards
EXT LINE FAULT	Not used
EXT LINE RESTORE	Not used
FACTORY RESTART	Factory default loaded
FAULT 4K4 #####	Zone has 4k4 fault
FIRE ALARM #####	Fire alarm from zone number #####
FIRE RESET:-	Fire Alarm reset
FIRE WARDS:-	Fire alarm on wards
FIRST KNOCK #####	First activation of zone number ##### (zone with Double-Knock attribute)
FROM REMOTE #, ##	Not used
HI-SECURITY SET:	Wards set using "High Security" feature
ID LOOP RESTORED	Short circuit cleared from ID loop
ID LOOP SHORTED	ID loop is short-circuited
KEYPAD PANIC ###	Panic alarm raised from keypad (buttons 1 and 3 pressed)
KEYSWITCH ###	Keyswitch zone ##### activated
LOCAL ON LINE	Local connection with Downloader
LOCAL SERV CALL	Local connection with Downloader
LOCAL SERV END	Not used
LOCKSET ##### ON	Lock set zone ##### activated
LOCKSET ##### OFF	Lock set zone ##### deactivated
LOCKSET WARD ON	Lockset for ward enabled
MAIN POWER ON	Mains power applied to control panel
MAINS POWER OFF	Mains power removed from control panel
MASK ALRM S #####	Mask set alarm
MASK ALRM U #####	Mask unset alarm
MASK FLT S #####	Zone ##### masked when set
MASK FLT U #####	Zone ##### masked when unset
MASK TMP S #####	Masking zone ##### masked when set
MASK TMP U #####	Masking zone ##### masked when unset
MENU TIMEOUT #####	System timed out user #####, and returned to the normal standby screen
MODEM LOCKOUT	Modem locked-out (4 failed attempts made via Lineload)

NETWORK # FUSE	Network # polyfuse tripped
NODE TAMP OMIT	MSNode/MSPSU tamper omitted after confirmation timer expired
NORM. REST. #####	Normal alarm restore
OCCUPANCY SET	System set with people on site
ON LINE TO #	Online to remote PC
ON-SITE RESTART	On-site restart
PA WARDS:-	PA alarm on wards
PANEL LID TAMPER	Control panel lid tamper
PANEL STARTED	System powered up
PANEL TAMP OMIT	Panel lid timer omitted after confirmation timer expired
PANIC ALARM #####	PA Alarm from zone number #####
PANIC CODE #####	PA code from user number #####
PANIC REST. #####	Panic Alarm on zone ##### restored
PAYMENT EXPIRED	System payment timer has expired
PSTN FAULT	Telephone line fault detected
PSTN RESTORE	Telephone line fault restored
PSU BATT A #####	PSU Battery zone ##### active
PSU BATT H #####	PSU Battery zone ##### healthy
PSU FUSE A #####	PSU Fuse zone ##### active
PSU FUSE H #####	PSU Fuse zone ##### healthy
PSU PWR A #####	PSU Power zone ##### active
PSU PWR H #####	PSU Power zone ##### healthy
REARM ,OMIT #####	Zone ##### omitted after confirmation timer has expired
REARM SYSTEM	System rearmed
REARM TAMP OMIT	
REARM WARDS:-	Wards re-armed
REINST WARDS:-	Wards reinstated
REM COMMS FAILED	A remote service call failed
REM RESET ACTIVE	Remote reset via the REM RESET input terminal (RedCARE)
REM RESET FAILED	Remote reset failed
REM RESET PASSED	Remote reset successfully carried out
REM SERVICE CALL	Remote service call in progress
REM SVC COMPLETE	The remote service call was completed successfully
REM SVC INCALL	A PC has made an incoming remote service call to the control unit
REM SVC OUTCALL	The panel started a remote service call to a PC
REM TAMPER	Not used
REMOTE ON LINE	The panel is connected to a remote PC
RESET WARDS:-	User or engineer has reset wards
RF PA #:#:#	Telecommand PA button pressed
RF SET #:#:#	Telecommand set button pressed
RF UNSET #:#:#	Telecommand unset button pressed
SEC KEY NO #####	Security key operated on zone number #####
SERVICE CALL END	Not used
SERVICE REQUIRED	System requires a service visit (Service Timer expired)
SET EXT L.FAULT	System set with external line fault
SET FAIL #####	Set fail caused by zone #####
SET FAIL WARDS:-	Set fail for wards
SET GENERAL FLT	System set with a general fault present
SET NO ACTIVITY	Not used
SET PSTN FAULT	System set with a line fault present
SET PSU BATT FLT	System set with a PSU Battery fault present
SET PSU FUSE FLT	System set with a PSU Fuse fault present
SET PSU PWR FLT	System set with a PSU Power fault present

SET SUPER WARN:-	Log message displayed when the panel has been set with supervision warning on radio zone(s)
SET WARDS:-	Wards set
SET WITH AC FAIL	Wards set with a mains fault present
SET WITH FLT 4K4	System set with 4k4 zone fault
SET WITH MSK FLT	System set with zones masked
SH.KEY OFF #####	Shunt key zone ##### deactivated
SH.KEY ON #####	Shunt key zone ##### activated
SHNT ##### REINST	Shunted zone ##### reinstated
SHUNT CODE #####	User ##### of type "Shunt" entered passcode to isolate zones
SHUNT END #####	Not used
SHUNT GROUP ##	Shunt Group ## used to isolate zones
SHUNT START #####	Not used
SHUNT ZONE #####	Zone ##### shunted
SILENT PA #####	Silent Panic Alarm zone ##### activated
SUMMER CHANGED	Not used
SUMMER TIME SET	Time changed at Summer changeover date
T.SWITCH # OFF	Time switch number # off
T.SWITCH # ON	Time switch number # on
TAMP 1 OMIT	Not used
TAMP ZONE #####	Not used
TAMP. REST. #####	Not used
TAMPER #####	Tamper alarm from zone number #####
TC #:##:# BAT LO	Telecommand has a low battery
TC #:##:# BAT OK	Telecommand has a healthy battery
TECHNICAL #####	Technical zone ##### activated
TEST FAIL #####	Zone number ##### failed whist on test
TEST TOTAL 00##	Total number of zone tested during walk test
TEST ZONE #####	Not used
TIME CHANGED AT	Time changed at specified time
TIME CHANGED TO	Time changed to specified time
TX #:##:# SUP FL	Supervision failure on radio zone
TX #:##:# SUP OK	Supervision no longer failed on radio zone
TX ##### SUP OK	Supervision is no longer warning on a radio zone
TX ##### SUP WARN	Supervision warning on radio zone
TX #:##:# BAT LO	Radio zone reports transmitter low battery
TX #:##:# BAT OK	Radio zone reports transmitter battery healthy
UNSET WARDS:-	Ward unset
UNSHUNT GROUP ##	Shunt Group ## used to reinstate zones
USER ##### DELETED	User number ##### deleted
WALK TESTED LOG	Not used
WALK TESTED:-	Wards walk tested
WALK TST OVERDUE	The panel raised an alert that a walk test was due, but a user did not acknowledge the alert.
WARD CONFIRMED:-	Ward confirmed alarm
WARD ENTRY:-	Ward entry
WARD SET FAIL:-	Ward failed to set
WARD TAMPER:-	Ward in tamper condition
WARDS LOCKED:-	Wards locked via security key zone
WARDS UNLOCKED:-	Wards unlocked via security key zone
WINTER CHANGED	Not used
WINTER TIME SET	Time changed at Winter changeover date
WLK TST FAIL LOG	Not used
ZONE TESTED #####	Zone number ##### tested during walk test routine

Option [2]-[9] Telecommand Configuration

Use this option when a MRNode is fitted to the system and you wish to program the function of telecommand buttons. Note that the MRNode must have "learned" the identity of the telecommands first.



Step 1 - Select Telecommand

The four digit number at the top left corner of the display indicates the telecommand to be programmed:

The first digit is the network number.

The next two digits specify the device address of the MRNode on the network bus.

The final digit specifies the telecommand.

When you first connect an MRNode, or if you have just taken an MRNode out of learn mode, the control unit may not recognise it immediately. The control unit may initially display an MRNode as follows (for example):

MSNode

2:04:1 MSNode
Not Learned

MRNode (in learn mode)

1:01:1 Not Used
Not Learned

The display will change to RNode once the control unit has adjusted itself to the new device. Once the control unit recognises the MRNode then the control unit will display its bus address as (for example):

Device type (MRNode)

Network 1, device 1,
zone 1

No radio devices
learned by this node.

1:01:1 RNode
Not Learned

Step 2 - Select Telecommand Type

Press  or , or key in a number  to , to select one of the following:

1 – Global

Allows a telecommand to set or unset any ward allocated to its buttons from any MRNode (see “Buttons” below). Note that this option may be overridden by the value of Option 45:11 Global/Local Setting and Option 45:12 Global/Local Unsetting

2 – Local

Allows a telecommand to set/unset wards only if the ward has been allocated to the MRNode which receives the transmission. (See Option 26 Assign Equipment to Wards.) The control unit will not set/unset any other wards, even though they may be allocated to buttons on the telecommand in the “Buttons” options (see below).

3 – Unused

The control unit will ignore any telecommand programmed as Unused, even though it may still be learned by an MRNode.

Step 3 - Program Buttons

The control unit identifies each button on a telecommand by a number. The keypad display indicates these buttons by showing the numbers followed one of the symbols “^, <, > or v” to indicate the position of the button on the telecommand, as shown in Figure 9):

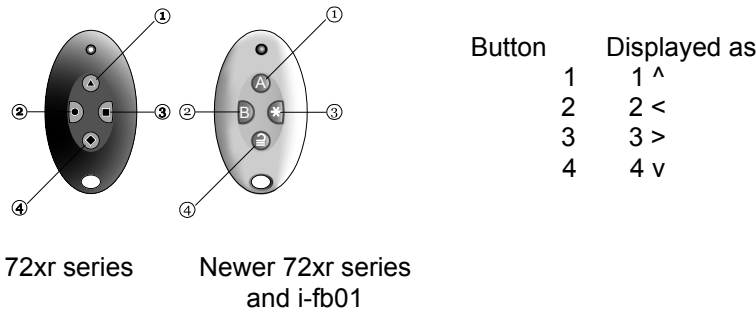


Figure 9) Telecommand Button Numbering

Press ENT repeatedly to step through each of the buttons in turn, followed by the “1+4” button combination.

Buttons 1 to 3: operate setting ward groups. Press any key 1 to 4 (or 1 to 8 on the M2000) to specify which ward group that button should set.

Button 4 always unsets wards. Press any key 1 to 8 to specify which ward(s) button 4 will unset. (Note: The system allocates to button 4 any wards in groups you select for buttons 1 to 3. You may override this selection if you choose.)

On a 722r and 727r button combination 1 + 4 always generates a PA. Press any key 1 to 8 to specify which wards the PA alarm will be associated with.

There are several models of PA transmitter. Some have two buttons and some have one button. To start a PA on two button transmitters press both buttons at the same time for more than one second.

When you are programming PA transmitters you cannot program the buttons to set or unset wards. Use the “Button PA” screen in option 8-4 to allocate PA transmitters to wards, and the “Telecommand Name” screen (below) to give the PA a meaningful name.

Step 4 - Program Telecommand Name

The top line shows the current telecommand name.

Press ENT if you wish to change the name.

Press numeric keys repeatedly to enter the text of the name (see Appendix A).

The bottom line of the display shows a “^” cursor symbol to indicate where the next character will go. After every character entry move the cursor by pressing the Up or Down arrow keys.

Press ENT to save the telecommand name.

5. TROUBLESHOOTING

Frequently Asked Questions

This chapter provides answers to frequently asked questions. You may find this chapter useful for troubleshooting purposes.

I've forgotten the engineer code. How do I reset it?

With power to the control unit already applied, momentarily short the FACTORY RESTART terminals on the PCB. *Note: If an installer has locked the NVM then this procedure will not restore the engineer access code.*

The manager code (user 1) has been forgotten. How do I reset it?

Use option [2]-[7]-[3]-[7] (page 131).

How do I delete users?

Set the user type in User option [2]-[4] to "Not in use".

Alternatively, you can delete by selecting User Codes in option [2]-[7]-[3]-[8] (page 132).

This also defaults the engineer and user 1 passcode.

Why is a keypad wired to an MSNode not being recognised?

You may have wired the keypad while power was still applied to the MSNode (not recommended). Remove then reconnect the power from the MSNode, then log back in as an engineer. You should now find that the keypad is recognised.

Why is a keypad or other device not responding correctly?

Try the following:

1. Make sure that no two devices on the same network have the same address.
2. Check the voltage at all points of the network across the A (+) and B (-) terminals; the voltage should be at least 12V. If the voltage is low, follow the suggestions described on pages 13 to 14. If an external power supply is used, follow the advice given on page 14.

Note: If you are going to install an external power supply make sure that it has a "floating zero volts rail" (the MSPSU has this feature).

3. Check for an earth fault: Switch on the mains supply and measure the DC voltage between the mains earth connection and the AUX +12V terminal. **Caution: Do not make contact with mains live or neutral!** Then measure the DC voltage between the mains earth connection and 0V. In both cases, the measurement should be 1V or less. If the voltage is greater than 1V, the system has an "Earth Fault" and you should check all cables for isolation to earth. You can do this by disconnecting cables or cores from the control unit one at a time and re-measuring the voltage until the fault is located.

Once you have identified a faulty cable/core then you can trace along its length to locate the fault.

Note: An external power supply that does not have a "floating zero volts rail" will cause an earth fault if it is connected to the network(s).

4. Make sure that the "Cable Segregation" advice given on page 9 has been followed. Check that equipment is not sharing cables. For example detectors, speakers, expanders and keypads should all be wired with their own cables.
5. Check for AC induced currents: Set the meter to measure low AC voltages and measure the voltage between the mains earth connection and the AUX +12V terminal, then between the mains earth connection and 0V. The measurement should be less than 6Vac in both cases. If the reading is greater than this, try to locate the source of the interference (e.g. radio transmitters or electrical machinery). If the reading is between 6 and 10Vac, installing a 12V Spike Suppressor (for example the ACT1313) should help to reduce the effect. Connect the suppressor to 12V, 0V and mains earth.

Note: Avoid AC induction by making sure that the alarm cables do not run next to cables carrying AC current, such as mains cables, mains switch boxes and category 5 (Cat5) data cables.

If it is necessary to use screened cable, refer to the advice given under the heading "General Wiring Considerations" in the M800 or M2000 Installation Instructions.

6. Check that cables do not exceed the maximum specified distances given on page 9. A Networker Interface Board (NIB) can be used to increase cable distances (see page 11).
7. Make sure that no more than 3 branches are star connected to a control unit (see page Figure 3) Maximum Distances to MSNodes).
8. Use option **2-7-3-6** (page 131) to check for network (data transmission) errors.
9. Check the AC voltage on the secondary side of the transformer in the control unit (i.e. between the wires going from the transformer to the PCB). Set your meter to AC. You should obtain a reading of between 17 and 21 Vac.

If the secondary voltage is low, with your meter still set to AC, check that the mains voltage between Live and Neutral coming into the control unit transformer is between 225 and 254 Vac. **WARNING: Mains voltages can cause serious injury!**

10. If you think there may be a problem with a device such as a keypad: a) temporarily disconnect all devices from a network at the control unit, b) wire the suspect keypad (or other device) to that network on the control unit using a short length of new cable. If the keypad (or other device) now works correctly, this indicates a problem with the original cable run, the terminations or the output from the device that it was connected to. If it still does not work correctly, there is possibly a fault with the device itself.

Why are false alarms occurring?

Ensure that detectors have been positioned and installed correctly, in accordance with normal good practice.

Follow the advice given for "Why is a keypad or other device not responding correctly?".

Check the resistance of the wiring to the zone sensor: disconnect and short the two zone cores at the sensor end, then disconnect the same cores at the control unit and measure the resistance between them. This must not exceed 100 Ohms.

Why is there strange text displayed at a keypad?

Follow the advice given for "Why is a keypad or other device not responding correctly?".

Why is the system indicating that remote keypads or other devices have been removed?

Follow the advice given for "Why is a keypad or other device not responding correctly?".

No keypads are responding. What should I do?

Try the following in order:

1. Check that mains is connected to the control unit and/or a charged battery is connected.
2. Perform a factory restart – keep the "FACTORY RESTART" pins shorted while applying power to the control unit. **Note: all programming will be lost!**
3. Check that the control unit is powered up and that the "HEARTBEAT" LED on the PCB is flashing once per second. If it is not, the control unit will need to be replaced.

How do I switch on the internal communicator?

Choose a setting other than Disabled in option [2]-[5]-[2]-[1] (page 110), and make sure that all other options with option [2]-[5]-[2] (e.g. [2]-[5]-[2]-[2]) have the appropriate settings. If the phone line is broadband, make sure that the control unit connects via an ADSL filter.

How do I wire an anti-masking zone?

Refer to the Installation Instructions.

Can TS900 nodes be used on a system?

Yes, they can, but you cannot mix TS900 nodes with MSNodes or MRNodes on any network. Up to 5 TS900s can be on one network, depending on control unit type.

How can I prevent a user from resetting a confirmed alarm?

Select the appropriate partitions in option [1]-[3]-[2]-[1] (Conf Reset , page 35). Note that an engineer reset is not required if the user silences the alarm within the Abort Delay period set in option [1]-[5]-[2]-[1] [2] (page 64).

Can I use TSXNodes on a system?

You can connect one or more TSXNodes provided you group them on their own Network.

I'm having trouble connecting to the ARC over a landline. What can I do?

If the line is shared by a broadband connection then try fitting an approved ADSL filter to the line. For BT landlines you can fit an ADSL01 module to the later versions of control unit pcbs (see the M2000 or M800 Installation Instructions).

Appendix A: Text Keys

The following tables show how to obtain characters when entering descriptions or names at the keypad. There are two tables: use Table 1 for options that normally require a text description. Use Table 2 for options that normally require a numeric value, but where alphabetic characters are also accepted.

If, for example, you want to obtain the "B" character using Table 1, press **[2]** twice.

Once you have chosen the character you require, press **[→]** to move the cursor to the right to edit the next character. The **[←]** key moves the cursor to the left.

Note: When you reach the end of the character sequence, the next press of the same key takes you back to the beginning of the sequence. For example, in Table 1, the eighth press of the **[2]** key displays the "A" character.

Note: <sp> represents the space character.

Table A-1: Obtaining characters for options that normally require a text description

Key	Characters Generated (in Sequence)									
[1]	.	,	?	!	1	@	"	-	&	'
[2]	A	B	C	2	a	b	c			
[3]	D	E	F	3	d	e	f			
[4]	G	H	I	4	g	h	i			
[5]	J	K	L	5	j	k	l			
[6]	M	N	O	6	m	n	o			
[7]	P	Q	R	S	7	p	q	r	s	
[8]	T	U	V	8	t	u	v			
[9]	W	X	Y	Z	9	w	x	y	z	
[0]	<sp>	0	,	#	*					

Table A-2: Obtaining characters for options that normally require a numeric value

Key	Characters Generated (in Sequence)				
[1]	1	.	,	?	!
[2]	2	A	B	C	
[3]	3	D	E	F	
[4]	4	G	H	I	
[5]	5	J	K	L	
[6]	6	M	N	O	
[7]	7	P	Q	R	S
[8]	8	T	U	V	
[9]	9	W	X	Y	Z
[0]	0	<sp>			

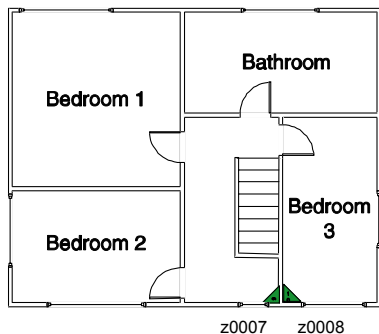
Appendix B: Installation Quick Start Guide

Domestic Simple

The heart of simple domestic setting and un-setting on the M Series Control Panels is the “Group Options” menu.

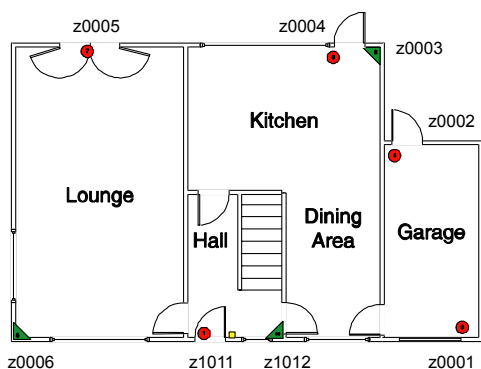
Program the functions listed on pages five and six and the system will work. If you need to add other details such as Engineer reset then do so. Avoid altering other Configuration options as these can change the way setting groups work.

A basic house



Zone List:

- 1011. Front Door
- 1012. Hall PIR
- 0001. Garage Shutter
- 0002. Garage Rear Door
- 0003. Kitchen PIR
- 0004. Kitchen Door
- 0005. Lounge Door
- 0006. Lounge PIR
- 0007. Landing PIR
- 0008. Bedroom 3 PIR



The diagram above shows a typical house that requires a little extra protection because a flat roof above the garage gives easy access to Bedroom 3.

The user requirements are: full set, part set, and a second part set to allow a guest in Bedroom 3.

To program the system

Eng 1 Menu 1 - Program Zones

Zone	Location	Type (Hot Key)	Attributes	Wards	Description
1011	Keypad1 Zone 1	Final Exit (7)		123	Front Door
1012	Keypad 1 Zone 2	Entry (9)		123	Hall
0001	Panel zone 1	Normal Alarm (1)		123	Garage Front
0002	Panel zone 2	Normal Alarm (1)		123	Garage Rear
0003	Panel zone 3	Normal Alarm (1)		123	Kitchen
0004	Panel zone 4	Normal Alarm (1)		123	Kitchen Door
0005	Panel zone 5	Normal Alarm (1)		123	Lounge
0006	Panel zone 6	Normal Alarm (1)		123	Lounge Door
0007	Panel zone 7	Normal Alarm (1)		1	Landing
0008	Panel zone 8	Normal Alarm (1)		12	Bedroom 3

The Entry attribute allows this zone to act as Final Exit in part set (see option Eng1 Menu 3-2-16).

Assign Zones to Wards as shown and they will be armed in the corresponding Group

Eng 1 Menu 8 - Group Options

E1-8-1 Assign Groups

Group	Wards
1	1
2	2
3	3
4	Not used (Leave as default)

Note that M2000 provides up to 8 Ward Groups)

E1-8-2 Exit Modes

Group	Setting mode
1	Final Exit
2	Timed
3	Timed
4	Not in use (leave at default)

E1-8-3 Group Timers

Group	Exit	Entry	Delay (Bell)	Duration (Bell)
1	30 (default)	20	0 (default)	15 (default)
2	30 (default)	30	0 (default)	15 (default)
3	30 (default)	30	0 (default)	15 (default)
4	30 (default)	15 (default)	0 (default)	15 (default)

E1-8-4 Alarm Response

Group	Alarm Response
1	Full (default)
2	Local
3	Local
4	Not in use (leave at default)

Eng 1 Menu 3 - Attributes

E1-3-2-16 Entry is Final Exit in Part Set

Function	Wards
Entry=F/E	*23*

Eng 1 Menu 7 - Custom Text

E1-7-6 Group Names

Group	Text
1	House Full Set
2	Part Set
3	Part Set + Guest
4	(not used)

User Operation

To set:

Full set = Code + 1 + ENT

Part set = Code + 2 + ENT

Part set with guest = Code + 3 + ENT

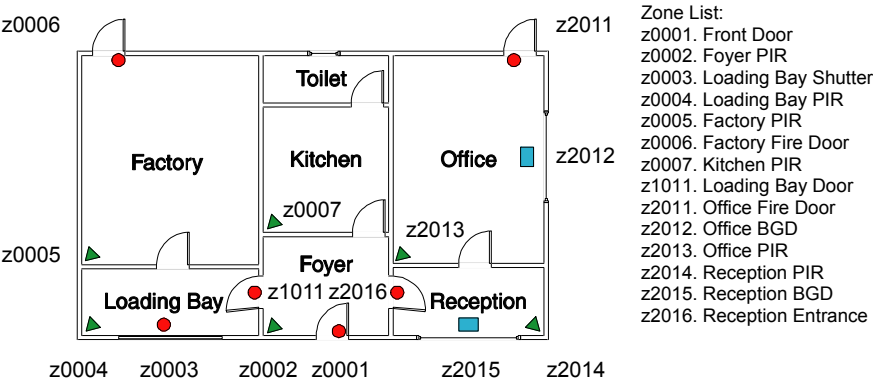
The display shows the text description of each set mode before the user presses the ENT key.

To un-set:

Open door or come down stairs to start entry timer. Enter Code.

Commercial with Foyer Mode

Use the M Series "Foyer Mode" to set a Commercial building that includes two or more separate areas linked together with a common area. This allows the control panel itself to set the common area when the last occupant leaves the building.



The above diagram shows a typical example of a commercial building that could use the "Foyer Mode".

The end user requires each side of the building to be set separately, as the Office and Factory staff will be working different hours. The control unit arms the common area (including the Foyer and Kitchen) when there is no one in the building. This allows either the Factory or the Office staff to use the facilities. For best operation, there should be two keypads: one fitted in the Loading Bay and the other fitted in Reception. The keypad in the Loading Bay connects to the control panel on Network 1. For convenience the Reception keypad connects to the MSNode.

As this is commercial, use of Grade 3 Anti Masking detectors, each with three-resistor wiring. See the MSNode or Panel Installer's Guide for details.

To Program the system

Eng 1 Menu 1 - Program Zones

Zone	Location	Type (Hot Key)	Attributes	Wards	Description
0001	Panel zone 1	Final Exit (7)	Chime 1 (8)	1	Front Door
0002	Panel zone 2	Normal Alarm (1)	Access (1) / Masking (6)	1	Foyer PIR
0003	Panel zone 3	Normal Alarm (1)		2	Shutter
0004	Panel zone 4	Normal Alarm (1)	Access (1) / Masking (6)	2	Loading Bay PIR
0005	Panel Zone 5	Normal Alarm (1)	Masking (6)	2	Factory PIR
0006	Panel zone 6	24 Hour (2)		2	Factory Fire Door
0007	Panel zone 7	Normal Alarm (1)	Masking (6)	1	Kitchen PIR
1011	Keypad 1 – Zone 1	Final Exit (7)		2	Loading Bay Door
2011	MSNode 1 – Zone 1	24 Hour (2)		3	Office Fire Door
2012	MSNode 1 – Zone 2	Normal Alarm (1)		3	Office BGD
2013	MSNode 1 – Zone 3	Normal Alarm (1)	Making (6)	3	Office PIR
2014	MSNode 1 – Zone 4	Normal Alarm (1)	Access (1) / Masking (6)	3	Reception PIR
2015	MSNode 1 – Zone 5	Normal Alarm (1)		3	Reception BGD
2016	MSNode 1 – Zone 6	Final Exit (7)		3	Reception Entrance

The Access attribute allows walk through when entering an entrance door

Assign Zones to wards so that areas can be set and un-set separately

Eng 1 Menu 3 - Ward Options

E1-3-1 Equipment to Wards

Device	Wards
Network 1 – Keypad 1 (1,01)	12
Network 2 – MSNode 1 – Keypad 1 (2,01)	13

E1-3-2 Attributes

Attribute option	Wards
06 Panel Speaker	12
12 Foyer Mode	23

The keypad connected to Network 1 follows the panel speaker. Therefore the panel speaker must be assigned to ward(s) used by that keypad. Keypads connected to MSNodes on Network 2 will follow the MSNodes' ward assignment.

Eng 1 Menu 5 - Timers

E1-5-1 Ward Timers

Ward	Exit	Entry	Delay (Bell)	Duration (Bell)
1	30 (default)	45	0 (default)	15 (default)
2	30 (default)	20	0 (default)	15 (default)
3	30 (default)	20	0 (default)	15 (default)

Eng 1 Menu 6 - Setting Modes

Ward	Mode (Hot Key)
1	Final Exit (1)
2	Final Exit (1)
3	Final Exit (1)

User programming

User 2 Menu 4 - Edit Codes

User	Code	Type	Wards	Auto Sets	Auto Un-sets
01	5678	Master	123	123	123
02	2222	Standard Ward	2	2	2
03	3333	Standard Ward	3	3	3
04	4444	Standard Global	23	23	23
05	5555	Standard Ward	23	23	23

A User with a "Standard Ward" code can set the wards which have been assigned to the keypad were the code is entered. If the User has been assigned more than one ward, then only the ward assigned to the keypad will set.

A User with a "Standard Global" code can set all wards assigned to that User from any Keypad. The "remote" wards will follow "Instant Set" mode as there is no one present in that area to activate the "Final Door".

A Master user mimics the functions of a "Standard Global" code.

Digital Communicator

The onboard communicator can be programmed to meet the requirements of ATS2. This is therefore suitable for a PD6662:2004 Grade 2 installation.

The communicator must be connected to a PSTN phone line.

To Program the Communicator

Eng 1 Menu 4 - Outputs

E1-4-3 Digi On-Board

Channel	Type
1	System 007 Fire (default)
2	System 006 PA (default)
3	System 005 Alarm (default)
4	System 008 System Set (default) or System 050 Alarm Abort
5	System 014 Active Omit (default)
6	System 060 General Fault (default)
7	System 011 Confirmed (default)
8	System 033 Tamper Fault (default)

Channel 4 can be changed to Alarm Abort to reduce the number phone calls made by the communicator.

Any channel not required can be made System 054 Always Off

Eng 2 Menu 5 - Communications

E2-5-2-1-option 2 Comms Format

Comms Format	2 Fast Format
--------------	---------------

E2-5-2-2-options 1/2/3 ARC No.

ARC No. 1	0123456789 (Issued by ARC)
ARC No. 2	0123456789 (Issued by ARC)
ARC No. 3	0123456789 (Issued by ARC)

E2-5-2-3-options 1/2/3/4 Account Number

Account No. 1	1234 (Issued by ARC)
Account No. 2	(Leave blank)
Account No. 3	(Leave blank)
Account No. 4	(Leave blank)

Test Call

A requirement of PD6662:2004 for communicators at level ATS2 states that there is a maximum interval between checking of the communication link. At grade 2 this is 25 hours.

The test-call feature can be used to achieve this either by arranging a fixed time per-day call or a call made a number of hours after the last successful communication. The method chosen should be arranged in conjunction with the ARC.

Dynamic Test Call

The internal comms can be programmed to make a test call to the ARC at a programmable amount of time after the last signal (of any type) was sent to the ARC.

Example of programming:-

1. Program "Test Call Strt" (Test Call Start, in Engineers menu 1-5-2-23) as 000 (Default)

2. Program "Test Call Int" (Test Call Interval, in Engineers menu 1-5-2-24) as 024 (or a period of your choice), the internal comms will now make a test call to the ARC 24 hours after the last signal of any type was sent

Note: To disable Dynamic Test call, leave as "Test Call Strt" "000" (Default) and leave "Test Call Int" as 000 (default).

OR: -

Static Test call

Static test call will make a test call to the ARC at a programmable time interval e.g. every ten hours.

Example of programming:-

1. Program "Test Call Strt" (Test Call Start, in Engineers menu 1-5-2-23) as 003, this will make the first test call at 03:00 (or 3am).
2. Program "Test Call Int" (Test Call Interval, in Engineers menu 1-5-2-24) as 010 (or a period of your choice), the internal comms will now make a test call to the ARC every ten hours i.e. the first call will be at 03:00 the next call will be at 13:00 and then at 23:00, 09:00 19:00 and so on.

Note: To disable Static Test call, leave as "Test Call Strt" "000" (Default) and leave "Test Call Int" as 000 (default).

Appendix C: Compliance Guide

This appendix explains how to configure M-Series control units to fulfil the requirements of DD243: 2004, the ACPO PA Reduction Policy and PD 6662 / prEN 50131-1: 2004.

DD243: 2004 Compliance

Please study this section if both of the following apply:

- 1. You are installing an alarm system in the United Kingdom.
- 2. The system has remote signalling and requires the local Police Authority to issue a URN (Unique Reference Number).

Note: The installed system will fully comply with the requirements of DD243: 2004 only if it has been designed in accordance with this section.

To comply with paragraphs 6.4.2 to 6.4.6 of DD243: 2004, select the following options.

DD243: 2002 Para:		6.4.2	6.4.3	6.4.4	6.4.5	6.4.6
Possible Installation		Unset from outside using a keyswitch zone input	Exit Mode of "Lock Set"	Keypad and User access code	Portable ancillary control equipment (with reader inside premises)	Requires ARC to unset
Option						
E1-9-2-01	Confirmation On/Off	On	On	On	On	On
E1-3-2-01	Confirmed Reset	Either	Either	Engineer (or Remote Reset)	Engineer (or Remote Reset)	Either
E1-3-2-02	Unconfirmed Reset	Either	Either	Either	Either	Either
E1-5-2-01	Confirmation Time	30 – 60 mins	30 – 60 mins	30 – 60 mins	30 – 60 mins	30 – 60 mins
E1-9-2-04	After Entry	No	No	No	Yes	No
E1-9-2-05	Entry Keypad Lock	Off	Off	Off	On	Off
E1-9-2-06	Confirmation zones	N/A	N/A	N/A	2 Zones	N/A

N/A = Not applicable

Options E1-9-2-02 and E1-9-2-03, which select whether sounders and bells start on the confirmed or unconfirmed alarms, may be configured as preferred but "unconfirmed" is recommended.

Communication signalling options are required to indicate to the ARC whether the system is set or unset and when a confirmed alarm occurs. This can be achieved using SIA or Contact ID, or using one of the following optional output types (E1-4) with "Digi H/Wired" or "Digi On Board":

008 – System Set 009 – System Full Set 011 – Confirmed

ACPO PA Reduction Policy

To comply with this policy, do not enable a duress code or dual-key PA. Set E1-9-1-24 (Duress Allow) to NO, and E1-9-1-25 (Keypad PA) to OFF.

PD 6662 / prEN 50131-1: 2004 Compliance

EN 50131-1: 2004, *Alarm systems – Intrusions and Hold-up Systems – Part 1: System Requirements*, sets four grades for intruder alarm systems to provide levels of security required for specific risks. M800 and M2000 control panels can be configured to fulfil the requirements of Grades 1 to 3. *Note: This guide does not apply to EN 50131-1:1997.*

Configuring Hardware

Zones can be wired as either double-pole or FSL (fully-supervised loop), as described in the *Installation Instructions*, but FSL is recommended. To allow remote servicing, FSL should be used.

The power available for connecting external devices to the control unit depends on the battery used and the grade to which the system is configured. Please refer to "Power Availability" in the *Installation Instructions*.

The built-in modem is suitable for signalling alarms at Grades 1 and 2. If it is used, test calls must be made (set with E1-5-2-23/24 as described below). At Grade 3, an external communicator is needed to provide the necessary encryption.

Programming for Compliance

Option ☐2-☒7-☐3-☐8-☒2 provides defaults suitable for Grade 2 or Grade 3. See page 132.

Engineer Quick Reference

Engineer Menu 1

1-1 Program Zones

p20

Zone type:

0= Not Used	Shunt Key
1= Normal Alm	Tamper
2= 24 Hour	Perimeter
3= PA Silent	Lock Set
4= PA Audible	PSU Battery
5= Fire	PSU Fuse
6= Technical	PSU Power
7= Final Exit	Masking
8= Exit Term	Occupancy
9= Entry	Security
Keyswitch	Shock Entry

Attributes (toggle to change to YES/NO):

1= Access	Chime Tone 3
2= Double Knock	Inverted
3= Soak Test	Shunttable
4= Omittable	Beam Pair
5= Reset	Monitored
6= Masking	Non Latching
7= Entry	Supervision
8= Chime Tone 1	Activity
9= Chime Tone 2	

1-2 Zones Advanced

p32

Zone resistance:

1= 4K7/2K2(CC)	3= 4K7/4K7
2= 1K0/1K0	4= 2K2/2K2

Zone Output Group

1-3 Ward Options

p34

1-3-1: Equipment to Wards

p34

1-3-2: Attributes

p35

01= Conf Reset	09= Re-arms
02= Unconf Reset	10= Secure Ward
03= Tamper Reset	11= Bell & Strobe
04= Remote Reset	12= Foyer Mode
05= Panel Tamper	13= Unset Fire
06= Panel Speaker	14= Multiply Ack
07= Aux/ Bell Tamp	15= Entry Unset
08= Payment Timer	16= Entry=F/E

1-4 Outputs

p39

Output type:

1= Panel	4= Equipment
2= Digi H/Wired	5= O/M Modules
3= Digi On Board	6= Custom Outputs

Follows:

1= System	4= User
2= Ward	5= Zone Output Group
3= Zone	

If following the system:

000= Bell (SAB)	059=PSU - Power
-----------------	-----------------

001= System Strobe	060=General Fault
002= Switch 12 Volts	061=Mask Tamper
003= Detector.Reset	062=Mask Fault
004= Walk Test	063=Mask Alarm
005= Alarm	064=Fault 4k4
006= Panic Alarm (PA)	065=Pending
007= Fire Alarm	066=Always off
008= System Set	067=Ext. Line Fault
009=System Full Set	068=ATS Test
010=System Open	069=Ready to set
011=Confirmed	070=Auxiliary Fuse
012=Courtesy Light	071=Bell Fuse
013=Engineer On Site	072=Network 1 Fuse
014=Active Omit	073=Network 2 Fuse
015=Zones Omitted	074-079=Always Off
016=24 Hour Omitted	080=Rem Batt Fault
017=24 Hour Alarm	081=Rem Mains Off
018=Zones Shunted	082=Rem Pwr Out Fit
019=Technical	083=Sys Batt Fault
020=PSTN Line Fault	084=Sys Mains Fault
021=Panel Mains Off	085-099=Always Off
022=Access Code	100=Auto-Setting
023=Soak Test Fail	101=Always Off
024=First Knock	102=Always Off
025=Digi Failed	103=Always Off
026=Digi Successful	104-108=Always Off
027=Digi Active	109=PC Output 1 On
028=2nd Entry Only	110=PC Output 2 On
029=Entry Only	111=PC Output 3 On
030=Exit Only	112=PC Output 4 On
031=Exit / Entry	113-118=Always Off
032=Exit Fault	119=Custom O/P 1 On
033= Tamper Alarm	120=Custom O/P 2 On
034=Rem Service Call	121=Custom O/P 3 On
035=Code Accepted	122=Custom O/P 4 On
036=Service Required	123=Custom O/P 5 On
037=Reset Required	124=Custom O/P 6 On
038=Strobe On Set	125=Custom O/P 7 On
039=Duress Alarm	126=Custom O/P 8 On
040=System Part Set	127-128=Always Off
041=LockSet Unlocked	129=Time Switch 1 On
042=Set Failed	130=Time Switch 2 On
043=Shunt Code	131=Time Switch 3 On
044=Random Output On	132=Time Switch 4 On
045=Modem Lockout	133=Time Switch 5 On
046=Aux/Bell Tamper	134=Time Switch 6 On
047=Panel Lid Tamper	135=Time Switch 7 On
048=Chime Mimic	136=Time Switch 8 On
049=Monitored O/P On	137=Time Switch 9 On
050=Alarm Abort	138=Time Switch 10 On
051=Rem Call Enabled	139-148=Always Off
052=Relearn Required	149= Supervision Fail
053=Always On	150= RF Jammed
054=Always Off	151= TX Low Battery
055=Battery Test On	152= Tcmd Low Batt
056=Panel Battery Fault	153= Set Pulse
057=PSU - Battery	154= Unset Pulse
058=PSU - Fuse	

If following a ward:		
00= Bell-SAB	25= Exit	
01= Strobe	26= Exit/Ent.	
02= Switch 12	27= Exit Flt	
03= Det.Reset	28= Sndr Ctl.	
04= Walk Test	29= Perimeter	
05= Alarm	30= Shunted	
06= P. A Alarm	31= AlwaysOff	
07= Fire Alm.	32= SetStrobe	
08= Set	33= Access	
09= 2nd Entry	34= LS Open	
10= 24Hr Alm.	35= PSU Batt	
11= Cnf Alarm	36= PSU Fuse	
12= Zone Omit	37= PSU Mains	
13= Act.Omit	38= Mask Tamp	
14= 24Hr Omit	39= Mask Flt	
15=Set Fail	40= Mask Alarm	
16=Settling	41= Security	
17=Clear	42= Supervision Fail	
18=Tamper	43= RF Jammed	
19=Reset Req	44= Tx Lo Batt	
20=Lock-Out	45= Telcmd Batt	
21=Chime On	46= Set Pulse	
22= Monitor	47= Unset Pulse	
23= Alm Abort	48= Fault 4k4	
24= Entry	49= Ready Set	
If following a zone:		
1= Mimic	4= Test Fail	
2= Alarm	5= Omit	
3= Tamper		
1-5 Timers		p60
1-5-1: Ward Timers		p60
1= Exit	3= Bell Delay	
2= Entry	4= Bell Duration	
1-5-2: System Timers		p62
01= Confirmation	17= Service Time	
02= Sys Bell Dly	18= Select Menu	
03= Sys Bell Dur	19= Keys Til Tamp	
04= Anti Mask	20= No. of Rearms	
05= Line Fault	21= Remote Resets	
06= AC Off Delay	22= Double Knocks	
07= Soak Test	23= Tst Call Strt	
08= Exit Settle	24= Test Call Int	
09= 2nd Entry Dly	25= Reset Alg.	
10= Double Knock.	26= Payment Time	
11= Abort Period	27= Hi Security	
12= Abort Delay	28= Supervision Warning	
13= Courtesy Time	29= Supervision Fail	
14= Menu time-Out	30= Set Status	
15= Beam Pair	31= Defer Count	
16= Defer Setting	32= A.Set Warning	
1-5-3: Exceptions		p66
1-5-4: Auto-Sets		p70
1-5-5: Time Switches		p72
1-5-6: Code Locks		p75
1-6 Setting Modes		p76
1= Final Exit	4= Instant Set	
2= Exit Terminate	5= Deferred Set	
3= Timed Exit	6= Lock Set	
1-7 Custom Text		p78
1= Reset message	5= Banner Text	
2= Location text	6= Group Names	
3= Printer title		
4= Remote Reset Msg		
1-8 Group Options		p80
1-8-1: Assign Groups		p80
Group 1 to 4 (8 on M2000)		
1-8-2: Exit Modes		p81
1= Final Exit	5= Deferred Set	
2= Exit Terminate	6= Lock Set	
3= Timed Exit	7= Silent Set	
4= Instant Set		
1-8-3: Group Timers		p82
1= Exit	3= Bell Delay	
2= Entry	4= Bell Duration	
1-8-4: Alarm Response		p83
1= Full	3= Internal	
2= Local		
1-9 Configuration		p84
1-9-1: General		p84
01 = Ward OFF / ON		
02 = Bell is an SAB / Bell is an SCB		
03 = View Alms Unset / View Alms P.set		
04 = Engr Authorised / User Authorised		
05 = On-Line (Keypad) Enabled / Disabled		
06 = Unset Ward First / Set Ward First		
07 = Digi Normal / Digi Inverted		
08 = Chime Audible /Chime Visible		
09 = Manual Omits / Automatic Omits		
10 = Omit Tamper No / Omit Tamper Yes		
11 = Global Setting / Local Setting		
12 = Global Unsetting / Local Unsetting		
13 = 24hr Omit Global / 24hr Omit Local		
14 = Ward Bell Time / Global Bell Time		
15 = Latching Fire / Nonlatching Fire		
16 = Timed code o/p / Latched code o/p		
17 = Latching 24hr / Nonlatching 24hr		
18 = Access code only / Access all codes		
19 = NVM is Unlocked / NVM is Locked		
20 = Unshunt, no exit / Unshunt & exit		
21 = Ignore errors / View exit errors		
22 = Mimic, All times / Mimic, Set only		
23= Lo Security Eng. / Hi Security Eng.		
24= Duress Allow NO / YES		
25= Keypad PA OFF/ON		
26= P.Set Hotkey YES/NO		
27 = Exit Foyer / Inst Set Foyer		
28 = Unset Entry Wards / All Wards.		
29 = Radio PA Audible / Silent		
30 = Silent Alerts / Audible Alerts		
31 = Bus cut Conf / Unconf		
1-9-2: DD243		p89
01 = Confirmation On / Off		
02= Sndrs on Unconf / Confirm		
03= Bells on Unconf / Confirm		
04= After Entry No / Yes		
05= Ent KPD Lock Off / On		

06= Confirm 2 Zones / Confirm 1 Zone	
[1]-[9]-[3]: EN50131	p91
01= 4 Digit Codes / 6 Digit Codes	
02= Internal Sounder / Local Sounder	
03= Instant Alarm / Delayed Alarm	
04= Tamper As Alarm / Tamper As Tamps	
05= Gen/fault: User / Eng	
06= Telecommand Override	
07= 4k4 Masking	
08= Mask Override / Mask Inhibit	
09= Mask Unset Fault / Tamp / Alarm	
10= Mask Set Alarm / Fault / Tamper	
11= AC Fail: No Reset / User / Engineer	
12= AC Bypass: Always / Healthy / Never	
13= Line Fail: No Rst / User / Eng	
14= LF Bypass: Always / User / Eng	
15= Supervision Fail Alert / Alarm / Tamp	
16= Reset Supervision Healthy / User / Eng	
17= Reset Jamming Always / User / Eng	
18= Battery Reset Eng / Auto / User	
19= Batt. Override Never / Healthy / Always	
20= Status Timed / Always / Never	
21= Mask is General Fault No / Yes	
[1]-[0] Goto User Menu 1	p94

Engineer Menu 2

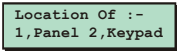
[2]-[1] View Zones	p98
[2]-[2] Time and Date	p100
1= Set Time	
2= Set Date	
[2]-[3] Volume Control	p101
[2]-[4] Change passcode and name	p101
[2]-[5] Communications	p102
[2]-[5]-[1]-[1]: Downloader – Password	p103
[2]-[5]-[1]-[2]: Downloader – Site ID	p103
[2]-[5]-[1]-[3]: Downloader – Access Mode	p104
1= Off	
2= Secure Call Back	
3= Unattended	
[2]-[5]-[1]-[4]: Downloader – Edit Call Nos.	p105
[2]-[5]-[1]-[5]: Downloader – Modem Options	P106
Rings To Answer:	
1= 1 ring	5= 10 rings
2= 2 ring	6= 20 rings
3= 3 rings	7= Never
4= 5 rings	
Baud Rate:	
1= 300	2= 1200
	3=2400
Answer Phone Defeat:	
1= Disabled	2= Enabled

[2]-[5]-[1]-[6]: Downloader – Remote Service	p106
1= Enable	5= Interval
2= Call Number	6= Call Back
3= Time Period	7= Walk Test Alerts
4= Next Service	
[2]-[5]-[2]-[1]: DigiCom – Comms Format	p110
1= Disabled	5= SIA 2
2= Fast Format	6= SIA 3
3= Contact ID	7= Extended SIA 3
4= SIA 1	
[2]-[5]-[2]-[2]: DigiCom – ARC Tel No.	p116
[2]-[5]-[2]-[3]: DigiCom – ARC Account Numbers	p117
[2]-[5]-[2]-[4]: DigiCom – Dialling Mode	p117
1= Consecutive	3= All
2= Alternate	
[2]-[5]-[2]-[5]: DigiCom – Restores	p118
1= Enable	3= Disable
[2]-[5]-[2]-[6]: DigiCom – CID/SIA Reports	p119
1= Full	4= Basic
2= Intermediate	5= Custom
3= Summary	
[2]-[5]-[2]-[7]: DigiCom – FF Channels	p119
1= 8 FF Channels	2= 16 FF Channels
[2]-[5]-[2]-[8]: DigiCom – Test Calls	p119
Press  to start test call.	
[2]-[5]-[2]-[9]: DigiCom – Line Fault	p119
1= Disable	2= Enable
[2]-[5]-[3]: Start CallBack	p119
1= Connect	4= Diagnostic
2= Upload from PC	5= Remote Service
3= Download to PC	
[2]-[5]-[4]-[1]: RS232 Options – RS232 Baud	p120
1= 600	5= 9600
2= 1200	6= 19200
3= 2400	7= 38400
4= 4800	
[2]-[5]-[4]-[2]: RS232 Options – Remote Modem	p120
[2]-[6] Alter Shunt Groups	p122
[2]-[7] Built In Tests	p123
[2]-[7]-[1]: Power Supply	p123
1= Panel Voltage	4= Charge Current
2= Battery Voltage	5= Discharge Current
3= Charge Voltage	6= Load Current
	7=Source Current
[2]-[7]-[2]-[1]: Outputs – Panel	p125

[2]-[7]-[2]-[2]: Outputs – Digi H/Wired	p125	[2]-[7]-[5]: Fuses	p136
[2]-[7]-[2]-[3]: Outputs – Digi On Board	p126	1= Auxiliary 3= Network 1	
[2]-[7]-[2]-[4]: Outputs – Equipment	p126	2= Bell 4= Network 2	
[2]-[7]-[3]-[1]: Equipment – Software Version	p127	[2]-[7]-[6]: Telecommand Battery	p136
[2]-[7]-[3]-[2]: Equipment – False Setting	p128	[2]-[7]-[7]: Telecommand Test	p138
[2]-[7]-[3]-[3]: Equipment – Confirm Devices	p129	[2]-[8] Log Functions	p136
[2]-[7]-[3]-[4]: Equipment – Zone Resistance	p129	[2]-[8]-[1]: View Log	p138
[2]-[7]-[3]-[5]: Equipment – Network Devices	p130	[2]-[8]-[2]: Print Log	p139
[2]-[7]-[3]-[6]: Equipment – Network Errors	p131	[2]-[8]-[3]: View Access Log	p139
[2]-[7]-[3]-[7]: Equipment – Default User 1	p131	[2]-[8]-[4]: Print Access Log	p140
[2]-[7]-[3]-[8]: Equipment – Default NVM	p132	[2]-[8]-[5]: System Print	p140
[2]-[7]-[3]-[8]-[1]: Default Configuration	p132	[2]-[9] Telecommand Configuration	p145
0= Custom Text? 8= Code Locks?			
1= Modem Data? 9= Autoreset Times?			
2= User Codes? Zones?			
3= Configuration? Telecommands?			
4= Outputs? Equipment Wards?			
5= Setting Modes? Net Equipment?			
6= System Timers? Ward Groups?			
7= Time Switches? Exception Periods?			
[2]-[7]-[3]-[8]-[2]: Change Country Defaults	132		
Select PD6662 Grade 2 or 3 in UK systems.			
[2]-[7]-[3]-[8]-[3]: Change Language	132		
[2]-[7]-[3]-[9]: Equipment – Test Display	p133		
[2]-[7]-[4]: System Inputs	p136		
1= PSTN Line Status 4= Aux/Bell Tamper			
2= Ext L.F. Status 5= Mains Supply			
3= Panel Lid Tamper 6= Remote Reset			

Location Option

Pressing 0 before entering Engineer Menu
1 or 2 displays the following:



You can use this screen to view the text set
up to identify the location of the panel
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